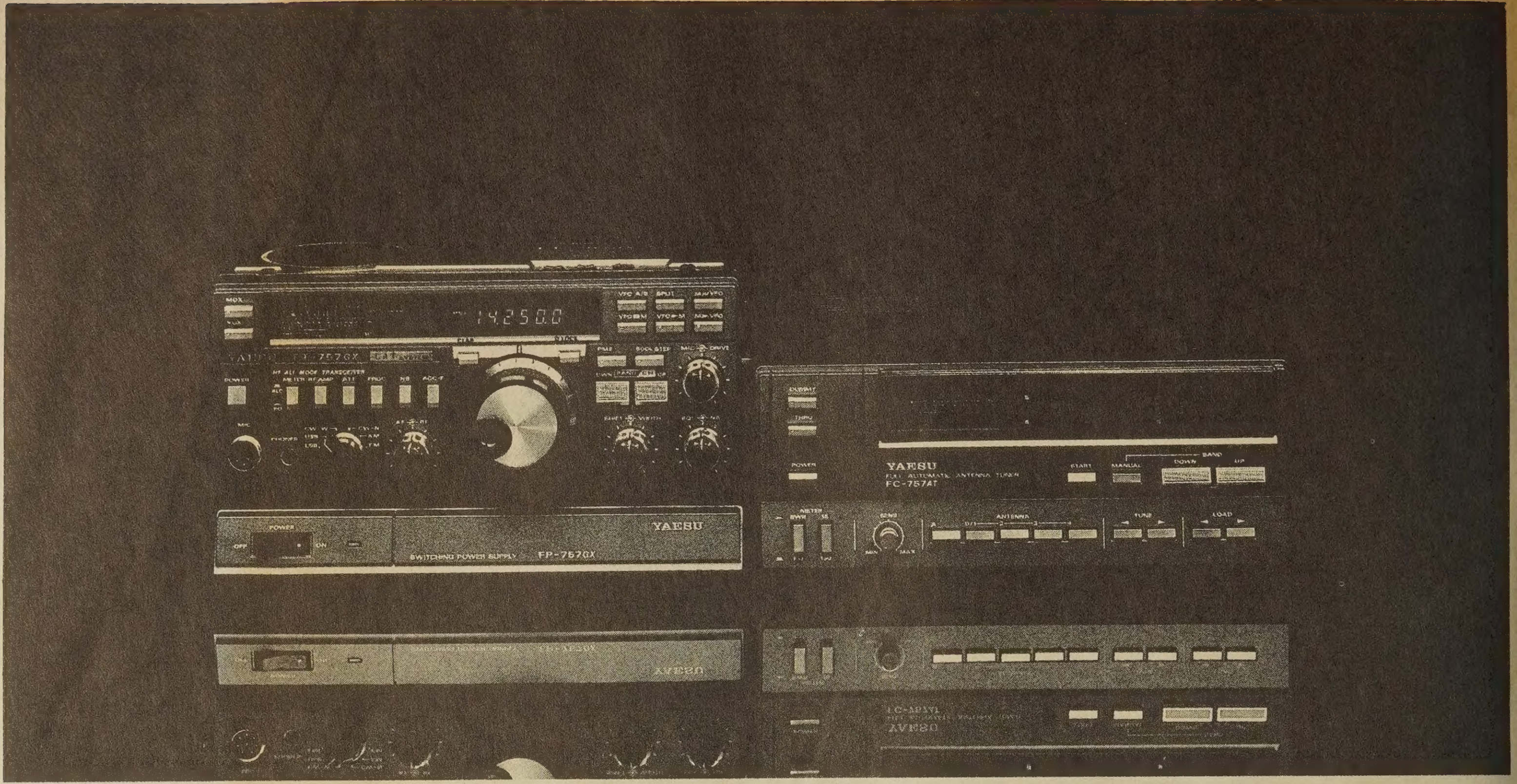
INTN'L MONTHLY MAGAZINE - BY AND FOR ACTIVE RADIOAMATEURS

RADIOSPORTING

DECEMBER 1984

$1.50

A VERY MERRY CHRISTMAS AND A HAPPY NEW YEAR



Yaesu HF radios rely on state-

Some people feel the name that goes on a radio is more important than what goes into it.

At Yaesu, we let our technology speak for itself: a unique blend of engineering know-how and user suggestions that make our HF products superior.

But don't take our word for it. Take a look at our transceivers and make up your own mind.

The economical FT-757GX. A mobile transceiver that might never leave your shack. You told us what you wanted in an HF rig that operates both in the car and at home. We've answered with the FT-757GX: a compact 12-volt transceiver with all the extras built in. Features you'd normally pay a lot more for.

As standard equipment you get AM and FM modes, electronic keyer with dot-dash memory, 600-Hz CW filter, noise blanker, AF speech processor and 25-kHz marker generator. All at no extra charge.

The FT-757GX's high-performance general coverage receiver lets you listen from 500 kHz up to 30 MHz. The transmitter covers 10 to 160 meters, including the new WARC bands. Dual VFOs and single-button VFO/memory swap make split-frequency operation easier than ever before.

Use the 8 memories to store your favorite frequencies on any of the bands. Then touch a button to jump to any programmed frequency without worrying about a bandswitch.

For base-station use, the space-saving FP-757GX flatpack power supply shown in the photo is ideal. With this supply, the rig delivers 100 watts output on sideband, FM and CW.

In addition, a massive heatsink permits continuous RTTY operation at full power output for up to 30 minutes. Full power for long periods does require the use of the FP-757HD heavy-duty supply.

To the right of the transceiver is the FC-757AT, a fully-automatic antenna tuner designed especially for the FT-757GX. This optional tuner stores in its memory the antenna selection and matching network settings for each band. When you operate that band again, the tuner automatically recalls the matching network settings and chooses the proper antenna.

With an optional interface unit, you can control VFO frequency and memory functions via your personal computer.

Contact your Yaesu dealer regarding MARS operation for both transceivers.

ALFRED A. LAUN, III

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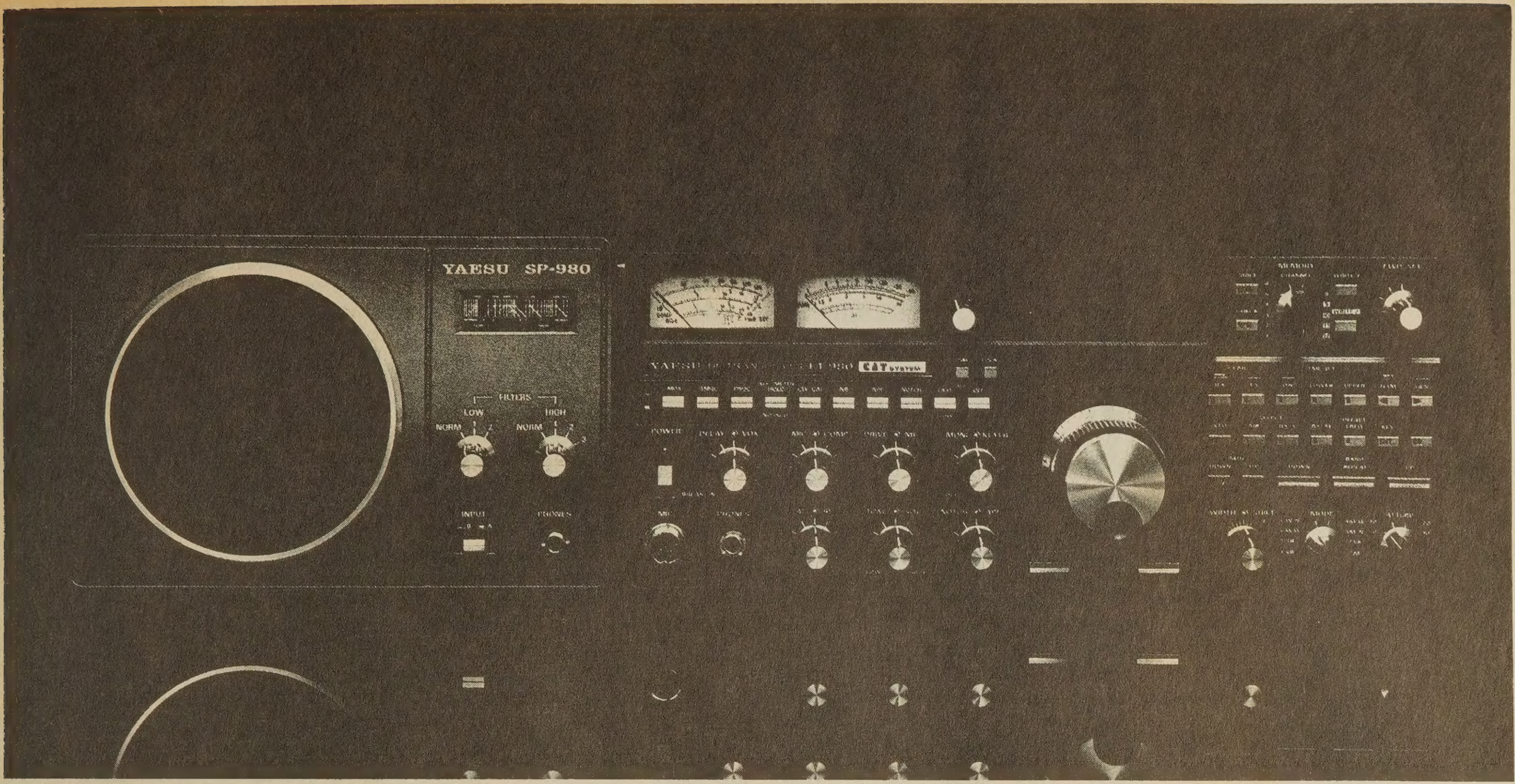

of-the-art, not state-of-mind.

The FT-980.
The cleanest signal on the air.
We know that the quality of the signal you put out is a reflection on you.

So when we designed the FT-980, we took clean output seriously. So seriously in fact, that you won't find a cleaner transmitter on the market.

Featuring a conservatively designed final amplifier that loafs at a fraction of its rated power output, the FT-980 cuts distortion levels to new lows. So you get a signal you can really be proud of.

We designed the FT-980 with complete operating flexibility in mind. But not at the expense of fundamental performance.

You can set and forget about 50% of the front panel controls.

Store your favorite frequencies and operating mode independently in each of the 12 memory channels. Review the contents of any memory location, without disturbing the QSO in progress, by using the checking function.

Going from one programmed frequency to another is simple and fast. Just touch a button to recall any channel.

You'll find the FT-980 tolerant of imperfect antennas. There's essentially no power turn-down with an SWR of 2:1 and just 25% turn-down at 3:1.

There's lots of flexibility built into the triple-conversion receiver. For one thing, there are separate front ends for ham and general coverage reception. So ham band operation is not compromised.

Multiple levels of IF filtering assure outstanding rejection of unwanted signals close to your operating frequency. And armchair copy under really brutal conditions.

The FT-980 comes ready to hook up to your personal computer. You can control operating mode, IF passband, frequency, and memory functions from a remote location. A variety of computer interfaces are available. See your Yaesu dealer for details.

State your mind.
When you visit your dealer, tell him you want the latest in HF technology. A radio built by Yaesu.

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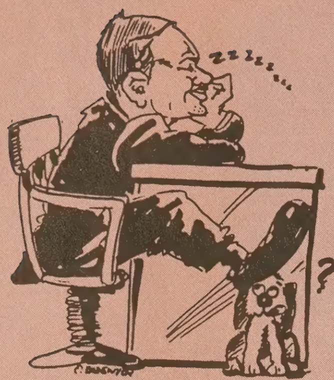


VE3BMV RADIOTORIAL

Our RADIOSPORTING baby has survived the birth; nobody threw it out with the water. We are still going through the post-birth pains, though. And there is a variety of them: computers, printers, type selection, and the pain in my neck and fingers from typing. The work in preparing this issue of the magazine and the setup of the mailing list made contest weekend "suffering" look like a coffee break! It was actually a relief for me to get involved in the CQ WW CW Contest. For the first time ever relief was spelled C-O-N-T-E-S-T! When the mailing list for the first issue was just about finished and ready to be printed, the disaster happened. All I wanted was to merge two files and finally we would be finished, right? Wrong! Murphy came to visit around 1 a.m., and instead of merging the files, he replaced the bigger one with the smaller one. There went two days' work down a floppy drain. I was ready to cry. It felt like your favored tower coming down five minutes before the contest! But the old contester (or sportsman) spirit kept saying: don't give up! NEVER give up! And this is why we went back over the fine print in the Call Book again and got all of you guys back into the computer. Where was the back-up you say? Well the back-up was promptly overwritten with "merged" files so it became a confirmation of the goof. It was just like when towards the end of a contest, you get so tired, that you are actually losing control over your conscious mind and you do funny things (or not so funny). We apologize for the delay, especially to those in the second bunch of mailing labels, which was for the contesters. Also, some problems at the post office added to the delay. As we go along, things should only get better. If contesters can beat records, I'm sure they can beat some "trivial" problems with their beloved magazine!

Thank you for the kind words to all of those who phoned and complimented us on the first issue. I also thank those who enjoyed 'BMV's writing on the pages of other magazines. We hope that you will continue to enjoy RADIOSPORTING and we will do our best to make this magazine your favorite reading.

We are pleased to announce that Ron Morefield, W8ILC - the world's best QRP operator has agreed to coordinate our Annual International Contest Symposium during the Dayton Hamvention. Rumors are that Bernie Welch, W8IMZ might be the moderator. More on that in future issues. Anyone wishing to help to coordinate and organize this event, please contact W8ILC. Contest and DX clubs in the vicinity of Dayton would especially be a tremendous asset.

We are trying to eliminate one growing problem that occurs during the Hamvention - with hospitality suites. As many of you know and have experienced, after the official Hamvention events, when the dark sets on Dayton, contesters and DXers descend on the Admiral Bembow, the Daytonian, and other hotels, and unofficial programs go on in various hospitality suits which various clubs maintain. This was OK when there were only two or three suites. We could manage. When you made a tour of them, you could meet almost all the big and little guns and friends. With more suites being run by more clubs, this tradition has spread over at least two hotels and a number of floors. It has become really hard to meet someone. You know he is there, but you miss each other in the process of search. At the same time, various clubs are putting on excellent presentations: video tapes, slides, and talks and it is really difficult to get to see them, for the same reason.

For the 1985 Dayton Hamvention, we propose that contesters and DXers have one large hospitality suite, with perhaps two thirds of it devoted to "show business" - presentations, etc., and one third devoted to "hospitality" - bars put on by various clubs as before. There you can have a drink, talk to your favorite friend or competitor and still, with one ear, follow what is happening at the "forum." If you are interested, you can go and watch the presentation. This way we will be ALL TOGETHER and will have more fun. The room will close when the last person leaves, which from past experience, will be around 4 a.m. Those from major DX and contest clubs please contact Ron, W8ILC, for more details and to book your "hospital"ity corner. Also, those with some serious or funny programs and shows, please let us know, so we can give these some advance publicity.

We will be pleased to exchange subscriptions with other Contest and DX bulletins and we will also publicize your special events such as Hamfests, Conventions and flea markets at no charge.

In case some advertisers have not noticed it yet, we have the most mature audience (with probably the most buying power looking for good equipment, and a lot of it. (Average Multi-Multi station needs at least: six stations.) We are the first ones out with a piece of news in the magazine because of our short lead time (typically six to ten days). If you have any new product releases, advertising or news, please let us know. Our readers will be first to know!

Many are asking about my Razor Beams! I miss them too! I just finished a year of operation with 3 el. Yagi on 40 m (54 ft. boom, tuned slightly out of the band). Works fine, but I can't help it. My feeling is that Razor or Quad would have performed better. When I compared my monoband contest scores in the past with results of "beacons" like N2AA and W2PV, with Razors it was closer to their scores; few multipliers up or down. Usually I did not have to "scream" in the pile-ups, one or two calls did it. Now on 40 m, using the 3 el. Yagi, the gap is bigger! I could not work YBs, DX1A and some other stations even after calling them for a while. As they say, you can't tell exactly what it is, but I sure feel better with ugly Quad elements up there, than with those "straight" Yagis. So down comes the 40 and up goes the 3 el. Delta Loop or Quad array for 80 m. It will be sort of a challenge to fit it (rotatable on the Bertha) on our 46 x 120 ft. lot, but who said it can't be done? We will have some more on the Razors in the near future. Stay tuned!

If you do not know what to give your "radio friends" for Christmas, give them subscriptions to RADIOSPORTING. It's good, inexpensive and a lot of fun! Hint for XYLs: RS instead of tie for OM?

Here's a happy and joyous Holiday Season, health, peace, love, freedom and understanding to you and your families! Merry Christmas and a very Happy and prosperous New Year!

73 and GL, Yuri

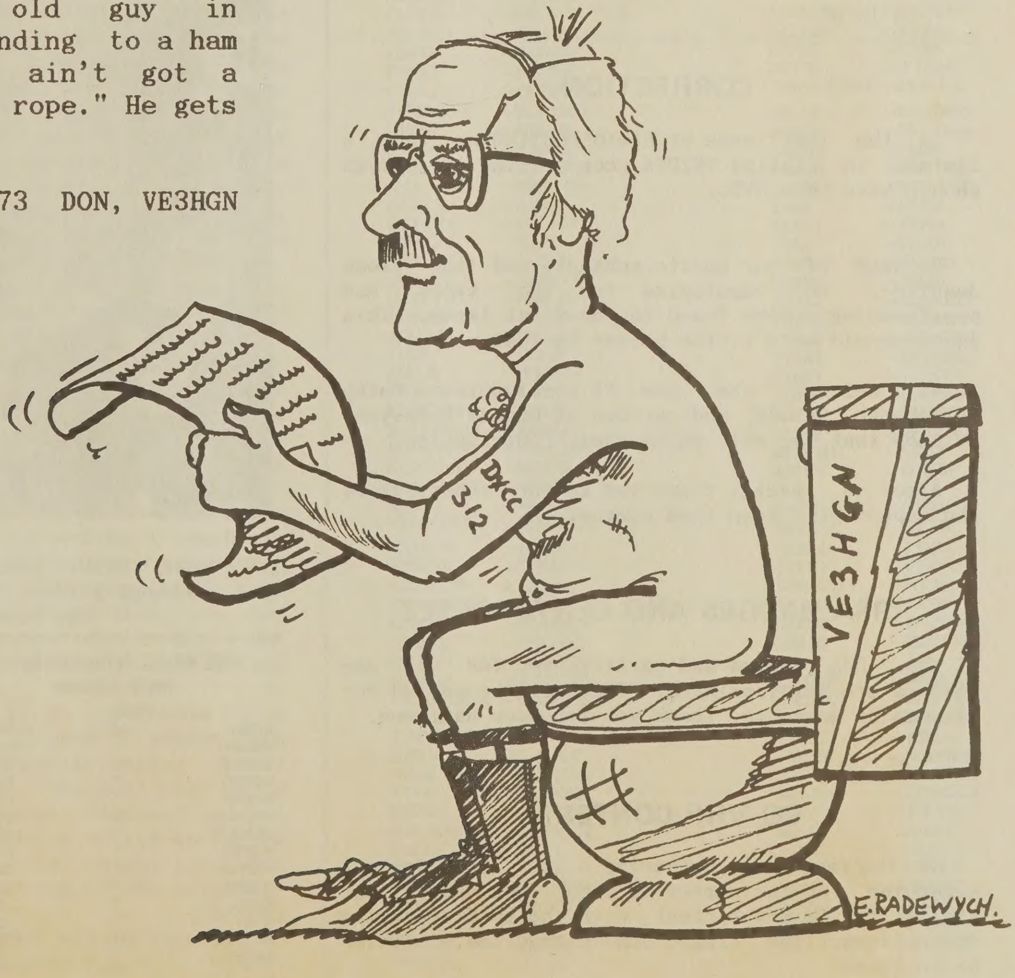
JUST A THOUGHT

When Marconi climbed to the top of Signal Hill, Nfld., it was not to have a QSO with someone in nearby St. John's. Rather, it was to reach out as far as he could, perhaps even to Europe. Lindburgh was not satisfied with flying from Long Island, N.Y., to Newark, N.J., nor was Sir Edmund content to scale Mont Blanc. Such people are exceptional individuals, achievers on a grand scale. Oddly enough, there are thousands of mountain climbers, thousands of pilots, and a million amateur radio operators who, for reasons personal and compelling, choose to fly from Buttonville to Toronto Island, drive one block to Becker's, and radio to the guy next door. Some will compare this mentality to delivering pizzas in a Ferrari or using a Rodin for an ashtray.

To those compulsive achievers, I say "Go for It," and when you succeed, I will join in the applause, but for chrissake, let me be my Ol' potty self, because scratching and clawing my way to the top does not turn me on.

P.S. The greatest line uttered on the bands this week was from an old guy in Georgia, responding to a ham in Italy, "Ah ain't got a rotor, ah got a rope." He gets my applause.

73 DON, VE3HGN



CONTEST NEWS

1984 CQ WW CW CONTEST

We were truly blessed with a half-decent propagation during the CW contest weekend. The 40 m band was the hottest one. The propagation over the previous two weeks looked like we have reached the bottom of the sunspots. Contrary to our old tradition of getting a bummer propagation for the contest weekend, things actually peaked for us. 160 m also showed some gains, while 80 m seemed to be a bit down from last year. 20, 15 and 10 meters were also down.

Here is the breakdown of Multi-Multi crews:

160	117	17	48		58	11	28
80	295	24	77		228	20	70
40	1239	38	123		956	36	108
20	1140	37	122		762	36	106
15	611	27	90		710	27	100
10	46	14	24		65	17	26
N2AA	3448	157	484	W3LPL	2779	147	438
	6.18 M				4.7 M		

CORRECTION

In the last issue of RADIOSPORTING we made a mistake in listing VE2USA scores. The call sign should have been 4V2C.

Because of our hectic schedule and the close deadline, we apologize for the typos and proofreading errors found in our first issue. This issue should be a little better in that respect.

We welcome the new YL columnist Cathy Hrischenko, VE3GJH, and cartoonist Eugene Radewych. We hope that you will enjoy their contribution.

Also, a special thank you to our contributors and supporters. Keep them coming!

IRSA BADGES AND CERTIFICATES

The IRSA badges and certificates for the new members are being printed. They will be mailed out as soon as possible. Thank you for your patience.

CQ VHF CONTEST

CQ Magazine is preparing a new VHF Contest scheduled for the summer of 1985. The rules are similar to the WPX contest, with the prefixes being multipliers. The single band categories will also be included.

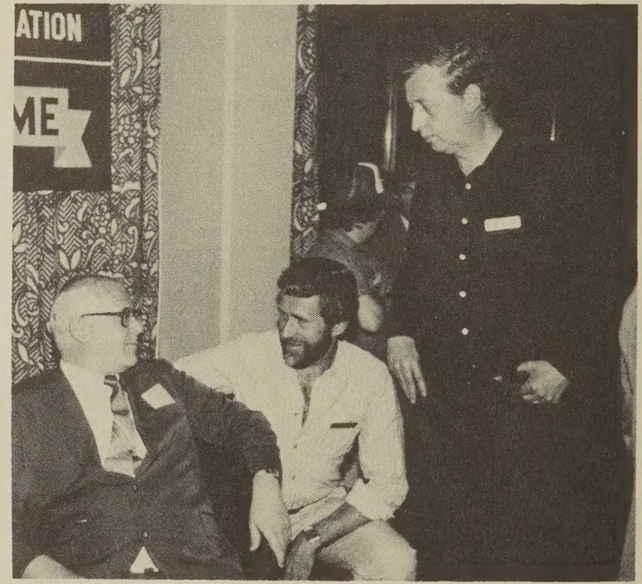
160 m DX WINDOW

Last year in CQ's 160 m Contest it became evident that it was also necessary for DX stations to observe the DX Window operating plan. Certain DX stations solicited on-frequency contacts in the Window,and the resulting pile-up made it almost impossible to hear the weaker DX stations trying to establish a split-frequency operation.

CQ now feels that the situation is getting out of hand and more drastic measures are necessary. In 160 m CQ Contest this year, on frequency contacts made between 1825 and 1830 kHz will have no scoring value during the hours the band is open for DX. Stations that consistently ignore this regulation will be cited and will be open to disqualification. This applies to both stateside and overseas stations.

There is no legal regulation that prohibits you from operating in the 1825 to 1830 kHz section of the band, but rules have a sportsmanship clause, so if you are a participant in this year's CQ 160 m Contest, govern yourself accordingly.

If you are not a contestant, please be as cooperative as you have been in the past and receive the gratitude of those who are trying to work that elusive DX in the Window. See the rules for 160 m CQ Contest in this issue. (W1WY)



Fred Laun, K3ZO, (left) and Erik Sjolund, SM0AGD, are exchanging ideas at NJDXA's hospitality suite at the Dayton Hamvention

1983 VK/ZL/0 Contest Results
North America

Phone

K6SVL	AB	27000
W3GM	"	6526
W7PQE	"	2552
K9GTQ	"	540
N4MM	"	306
WA3HUP	20	1800
VE3GCO	"	1320
W2FCR	"	576
VE3FEA	"	224
N1BRT	"	150
KW2J	"	54
K1BV	"	30
W0GOQ	10	1794
AA6EE	"	24

C.W.

KF1Z	AB	10406
W3GM	"	8020
W8UVZ	"	5184
K4JRB	"	4648
K4PI	"	2860
K3ND	"	1886
KW2J	"	1792
AJ0N	"	1548
W7PQE	"	1086
K9VKY	"	928
NE8I	"	784
KA7FEF	"	400
VE3AEJ/3	"	306
K3NTD	"	224
AA6EE	"	192
W9YCV	"	50
KA2MXO	10	144

DX NEWS

DX–PEDITIONING

CLARK HENSON, WB4ZNH

DXpedition! To "normal" people and to the more mundane Radio Hams, this word has no meaning whatsoever. What does it mean to the rest of us? To the DXer it means: possibly a new country, a new zone, or a new band country; an opportunity for flexing the muscles, testing the new antenna, and just making sure "WE" are still performing at our olympiad level. (Amateurs often use the term "WE" where others might use the singular pronoun "I". Doesn't this indicate a station team: the antenna; the receiver; the transmitter; and, lastly, the operator; in that order?)

To another group, this contraction, of DX and Expedition, has an entirely different meaning. To these people, DXpedition brings adventure, excitement, pleasure, disappointment, and frustration. Just like athletes competing in another sport, they too experience the thrill of victory and the agony of defeat. The DXpeditioner's arena and competition are, however, quite different. Most often, each DXpedition brings a new arena; there is no "home field" advantage, ever!

THE ARENA is itself the largest portion of the competition which the DXpeditioner faces. Often disinterested and anything but helpful, the arena can in fact be hostile and unco-operative with the DXpedition. Whether it be the elements or an irrational bureaucracy, the sweetness of the victory seems to be directly proportional to the effort exerted. After the initial "victory", of getting there and getting licensed, comes the secondary effort: the long hours of operating, punctuated with endless requests and demands. Yes, demands. Why weren't you here, or there? Why are you operating THAT way? You should do it this way, or that way! When are you going to operate; transceive; in the general band; on 80 m; CW (or SSB); by call districts; on such and such net? Each of these is a volley which our athlete must return. (Score points when returned smoothly with no disruption of the game. Lose points when the game requires a time-out, or the DXpeditioner caves in to requests which detracts from the DXpeditioner's primary goal).

The nice part of this game is that you never really completely lose. Even if you don't reach the actual operating stage, the hurdles are satisfying to cross and the anticipation of success will spur you on to put forth greater effort than you had believed possible. While trophies are the best, the stories about "the one that got away" aren't too bad!

RADIOSPORTING has invited me to contribute to a DXpedition column, and I am pleased to accept such an honor. On a more or less regular basis, I will be writing about DXpeditions. The goal will be to inform the reader as much as possible about recent activity, and will include stories of not-so-recent trips that might provide a little insight into what it is REALLY like on the other end of the pile-up.

(WB4ZNH)

(Sorry about the short "DX News" column this issue. We will have much more in the next one. Ed.)

QSL INFORMATION

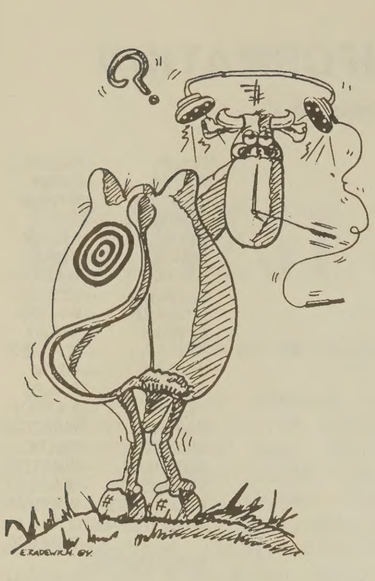
WORLDRADIO, December 1984

A4XJW —N4WVF
A22BW —OK3KD
A22DP —W7GVC
A22WZ —OE3NH
A24DM —AK1E
A92DQ —K2IJL
AH8A —K6EDV
AI5P/TF —W3HNK
BV0AB —JH6SOR
BV0W —W4WJ
C6ANU —VE1ZL
C30LAI —EA3BKZ
C30LBM —EA5AQX
C30ZA —WP2ABZ
CO2KK —KE5KK
CS3RTP —CT3BD
CT2CB —N2DUR
CT4NH —W3HNK
DJ0SB/C6A —DJ0SB
DK9KX/5A —DK9KD
DL3RC/LX —DL8YR
DL4AOJ/LX —DL8YR
DL4FU/LX —DL8YR
DL4KI/LX —DL8YR
DL8KAW/LX —DL8YR
DL8YR/LX —DL8YR
DP4KA/LX —DL8YR
ED1ISI —EA1ANE
ED2EEE —EA2AMU
ED3RCD —EA3CUO
ED7SVA —EA7GI
EI2VSV/EJ0 —DK7JR
EK1AB —UZ3DD
EL2EF —KM8E
ET3PS —DJ9ZB
F0AMY/FC —DL4FF
F0ICR/FO8 —I3EJ
F0IRK/TK —DJ2EY
FB8WJ —W4FRU
FG0UQ/FS —W3HNK
FM7CD —F5VU
FM7WD —W3HNK
FO8JP —F1BBD
FO8KP —F6GKB
FT8XA —F6FYD
FW0BX —ZL1AMO
HH2Q —I2YAE
HI3EMS —N2BJX
HK0BKX —WB4QFX
HK0HEU —HK0FBF
HL9XX —AF3R
HP1XEK —DL1HH
HP1XJC —NR4V
I1YXN/IA1 —I1YXN
IM0IGV —IS0MVE
IM0LYN —IS0LYN
J5WAD —UA4PW
J37AH —W2GHK
J73D —W2OB
J88AQ —W2MIG
JW0EQ —LA5NM
K1EFI/VP9 —K1EFI
K6SSJ/OH0 —K6SSJ
KA2DIV/V2A —WB4OSN
KC2CS/J6L —KC2CS
KC2JM/J6L —KC2JM
KC6JA —K6EDV
KD4HE/OA4 —WB2MOQ
KG4AW —KA4TAY
KG4DX —WB2CPV
LZ40KDP —LZ1KDP
ND5K/DU3 —ND5K
OD5NT —WA3HUP
OX3CX —SM6HCX
OX3GH —WA2TTI
OX3KP —OZ1HDF
PA3CPG/LX —PA3CPG
PP2ZZD —W4BAA
PY4WAS/PU8 —PY4WAS
RI8CA —RA3AR
RJ6K —UJ8JMM
RT1I —UB4IXZ
S8HZR —WA2HZR
SV0AC/SV9 —WB5GCP
T32AB —N7YL
TA2CN —N8CQ
TG9HH —N5HH
TG9VT —W3HNK
TI2WI —TI2J
TI4BGA —TI5BGA
TI5EWL —AG1K

TT8RP —F6KGU
TZ6FIC —F6CRS
UR1RWW —W7PHO
UZ9SWY —N7RO
V3KK —KE5KK
V85MS —N2OO
VE8YQ —WA9AEA
VE0MAR —VE2FOU
VP2MDG —W6FDG
VP2MIX —W0IJN
VP2VIX —WP2ABX
VP8AOB —K0JW
VP8AXJ —G4NFT
VQ9AC —KA3EDN
VQ9SK —WB6SKS
W3TB/TF —W3IVG
W0PU/SV9 —WB4TDB
WA2HZR/V9 —WA2HZR
WA2HZR/ZS —WA2HZR
WA2PWL/DU2 —WB0TEC
WB9IHH/V2A —WB9IHH
WP4ATF/KP5 —WP4ATF
XJ7R —VE7RG
XU1SS —JA1HQG
XX9DX —VS6DX
XX9WW —JH1AGU
YB3DC —KO2A
YB5ASO —W4BBP
YB0AFA —WA7OGU
YN1FI —VE3JDO
YN1QG —VE3JDO
ZC4CZ —G4MGQ
ZD8LA —G4OFY
ZD9CA —KA1DE
ZF2GE —WA4WTG
ZF2IB —4Z4DX
ZK2IK —ZK2NU
ZL7OY —VK3DWJ
ZL0AIX —N5GGL
ZP5JAL —KO2A
ZS3HL —KE1A
ZS3TL —W7PHO
ZS6BUX/A22 —ZS6BUX
ZS6JR —KA3DBN
ZZ2CW —PY2 Buro
3A2EE —F9RM
3A2GB —W2GBX
3A2RI —WP2ABZ
3A4E —F9RM
3A4F —F9RM
3C0A —I8ACR
3D2BD —ZL1BD
3D2FR —NE4S
3D2LJ —ZL1AXU
3D2MO —ZL1AXU
3D6AJ —WB3CQN
3V8AI —IN3RZX
3V8ZY —IN3RZY
4K0B —UA1MU
4N2KO —YU2BOP
4S7EF —JE2RDO
4S7NMR —KZ8Y
4S7VK —DJ9ZB

5H3BH —SM0EAI
5N3RTF —DK2IF
5T5RD —F6IJA
5T5RY —F6FNU
5W1EX —W6ZH
5X5GK —JA1BK
5Z4DE —W4PKM
5Z4JD —KB6AIT

6W1HF —W0ZUZ
6W1NQ —DL1HH
6W2EX —F6HRI
6Y5IC —KE3A
6Y5MC —WA4WTG
7P8CI —KA2CDE
8Q7RM —JE3MXQ
8R1AW —W7AW
9G1CI —LA4O
9J1NO —DL5FX
9M2HB —N4FFN
9Q5JE —DL0HT
9X5SP —DL8OA
9X5VL —ON4AR
9Y4NP —W3HNK



HERE'S THE BEEF

C. W. BUG

N0/F0OL

Welcome to my column, where you can beef about things that bug you! I'll try to hide my identity (or ...ies) for the same reason my boyfriend, K.N. Sterba from Worldradio does - so I don't get mobbed at the Dayton Hamvention. There certainly are things to beef about and Hams should at least know something about them. Then you can use your own judgement and decide if you want to swallow the baloney, or if you'd rather stick to pure beef (I won't discuss the merits of vegetarianism because I'm aiming for a large audience).

More and more, we're becoming appliance operators instead of builders, as we used to be a few years ago. Fortunately or unfortunately, we could build better stuff than radio companies could. They were learning from us. A lot of us were behind big names like RCA, Collins, Hallicrafters and others. Then the solid states came on the scene, things got a bit complex and it became easier (and cheaper too) to buy a box of thousands of transistors than to put it all together. Now, perfectionists that still want the best tend to modify commercial marvel radios rather than building them from scratch. But the new little digital boxes are getting very impressive (especially the ones from JA-pan land) and are super value. Business is very competitive, and if manufacturers don't stay in touch and keep up or slightly ahead, they will find themselves with products that nobody wants. Especially if there are better and cheaper ones around. It's a tough market. Hams are probably the biggest cheapskates around and they do a lot of shopping around to find the best equipment for their dollar. And when we start using those radios, the bad or good news spreads with the speed of light. You can't fool us!

Some hams don't want to learn any more than how to push the microphone button, and stay as dumb or as technically proficient as our 10-4 "good buddies" with a simple but tacky purchasing philosophy - buy the biggest, the "best", and the most expensive.

Three (or thousands of) cheers to the ARRL boys who got suspicious about the "wonder tuner" Maxcom Automatic Antenna Matcher from Magnum Distributing. Magnum wanted us to believe that they had an automatic tuner that matches anything on any frequency from 0.3 to 70 MHz, and with the speed of light! It was so good, and such a "revolutionary" design, that they had to seal it and "protect" the circuit from unscrupulous hams who might try to home brew it. In the days of X-rays and CAT scanners, you can't really hide much. After some investigation it turned out to be your friendly dummy load - a bunch of resistors with terminals for your antenna. Well, it had some electronics too, but that was just another dummy - scrap circuit board not connected to anything. (See QST, November 1984, page 53.) What's the price you pay for stupidity? The Maxcom 2000 sells for a bare $1000! That's bad for a few resistors a clever ham can buy at a local flea market for $5. You can even use your dummy load. Just attach the terminals for the antenna from both ends of the resistors and you got it! It's so simple that I don't dare publish the schematic for it. But you have to admit: it's worthwile to subscribe to RADIOSPORTING, if only to learn about this one money-saving idea. The cash you saved by not buying the Maxcom will buy a lifetime subscription to this publication for you, your family, AND your club. Watch out for more handy product tips. And if you did buy the Maxcom, have a good laugh and chalk it up to experience - and make sure you're on RADIOSPORTING mailing list for a long time to come.

The antenna business is tricky. As the late W2PV said: How many of you have measured your antenna gain lately? Probably very few. We read catalogues and compare the gain figures made up by advertising departments rather than by engineers. If you want to find out what really works, check contest results. Talk to the winners about their antennas. And if you find a winner who made his (or her) antennas, take any advice seriously. You just can't work something you can't hear. There's no amplifier (or preamplifier) that can amplify a signal that is not there!!!! This is what an antenna is supposed to do - to bring the signal in. Alligators look silly on the bands, with a "big mouth" and no "ears". Antenna is also cheaper as an amplifier than commercial "boilers". If you can direct your signal where it's supposed to go and under the right angle, you can hear a lot, and if you can hear it, you can ususally nail it with a 500 W.

Quite often you see some wonder antenna described in a reputable magazine and it's hard to separate the weeds from the flowers, unless you test, measure, get the pattern, etc. Even serious, well-educated experts can come up with some questionable conclusions. Fortunately we're dealing with something that can be verified. You contest boys do that especially testing in the battlefield. And for contest haters: be thankful, contesters do a good job.

There are a few articles that stick in my mind. There was a description of an unusual Quad antenna by ZF1MA in Ham Radio with a difference, another loop was about three inches from the driven element, and another two loops at the same distance from the director (I think). Then there was a phasing line between both elements. ZF1MA signals were good (although I wonder what the boiler was?) and the owner was very secretive about it at first, talking about patents, etc. Then an article appeared. Then someone tried it, building the model on 2 m. Somehow the thing didn't want to beat the reference dipole. The next step was to try just one element. It was still way down from the dipole. It all looked like a transformer with a shorted turn. Have you used one lately? I haven't heard anyone using that antenna.

Then there are assorted "scientists" that come up with conclusions based on laboratory tests and lab experiments using 900 MHz frequencies. I'm sure they have the best of intentions and do it as best they can. The trouble is, some of those things might look fine at 900 MHz but if you put them down to earth at 1.8 or 3.5 and include your local ground and other things that don't scale, you end up with baloney again. Then there are analyses of the Half Sloper, telling you that it doesn't or can't work well, when most of you know it beats the Inverted Vee on DX and quite often even the vertical. C'mon guys, come down to earth! Get your hands dirty and play with it in the real world, on real bands, in a contest if you can! Then publish the "paper".

In a contest you don't win by working only those stations that everyone can hear. You win by hearing and working those that others CAN'T hear. You can only do that by having a damn good antenna. THERE IS NO OTHER WAY. (Other things being equal, which they ususally are when it gets close to the top.)

Antenna experimenting and propagation research go hand in hand and this is still a vast area to be explored. You see commercial people "just work" without caring much about getting that extra dB out of the same boom length. They don't have the contests in which to compare their wares. They do have nice offices and fat pay cheques. We're faced with hungry contest animals trying to beat our last year's score and we have to figure out in our spare time how to defend it or beat it.

There are still so many things to be explored and discovered. Don't take anything to be cast in stone. Things are changing, instrumentation is getting better, and if you throw away any bias planted by "experts", there is a lot to be discovered and fun to be experienced. Don't be afraid to experiment and observe! You can build a much better antenna from scrap than from a $100 "dipole kit" which, incidentally contains 120 ft of wire and two insulators that you can buy for $4.

In a recent CW contest things were boiling: low bands were good; stations were wall-to-wall and close to, or on top of, each other. Still, you could find some nice "clear" spot a little higher up the band and you could finally get a little pile-up going - you could ran those weak Europeans. All of a sudden, click! A lot of clicks! Non-stop clicks! You tune to the side, and tune, and tune. Finally, about 10 kHz away, you find the "source". A CQ machine with a radio attached to it. A radio that is loud and bad; really bad. It's clicksing up and down at least 10-15 kHz. You call him and tell him (very politely, as you don't want to upset such a big bad signal), "please check your radio, it's bad" (and illegal; no country authorizes broadband signals in the HF spectrum). He says: "Thank you and QRZ...", and just keeps on going. What can you do? I guess it depends on your family roots and connections. If know any 5A friends you can contract them to do the job and presto! The problem is gone, literalily. If not, you can grind your teeth and QSY to another end of the band and pray that another garbage truck doesn't show up at your end of the RF highway.

I recently got a speeding ticket because my GM car ha a faulty speedometer. The judge said it's my responsibility to keep my equipment in good shape, and the supreme court confirmed it! So it is our responsibility to keep our signals clean and legal. It's a bad score if a well-known DXer or contester has a rotten signal; it paints a bad picture of him, his family, ancestors and country. We are representatives of countries in international competition and we don't want to be cursed. (At least I don't.) So check your radios from time to time. Even the best commercial marvel can get out of line. And if someone tells you you are bad, maybe it's true. It might require turning the drive down (if the problem isn't generated by the keying circuit). A certain brand of radios seems to be guilty more than others, so we're notifying the manufacturer.

Contest rules require that you obey your country's rules and regulations. If you transmit a wide signal you violate the regulations, and therefore can be disqualified. Contest committee members are usually active contesters and they can hear you. So why not check your radio, and make sure that you are a respectable representative of your country and a welcome signal on radio haighways?

Some might wonder about my call sign. Since some of you operate with our french prefixes/ your calls, I figured I'd use my call after the N0 prefix while I'm in Missouri. I'm not OK in the Call Book and I don't QSL!

Do YOU have any beefs? Let me know via RADIOSPORTING!

73 and Au reservoir! Clara, N0/F0OL

EFFICIENT MANUAL LOGGING IN CONTESTS

YURI BLANAROVICH, VE3BMV

Besides having fun working the pile-ups in a contest, there is the less pleasant part to it – the "paperwork". Logs, dupe sheets and other forms and charts that might help us to operate and let us know where we stand. It takes about 6 – 8 hours to dupe the log with about 2000 contacts (and that is for an experienced contester using familiar forms).

This is the best job for the computer, but if you do not have one, here is the one possible way of doing it manually. It evolved over the years and it suits me the best. (I am still not using the computer for logging/duping.) When you are operating mostly mono-band categories in the contest, I think this system is quite efficient and gives a good graphical picture of what is going on during the contest.

I have been member of the CQ Contest Committe and had the "pleasure" of seeing some of the logs that were submitted. Some of the things you can find in contest logs you would never think were possible. Just to mention a few: One champ never bothered entering dates, times, exchanges, he just had the call signs. Another one just sent in the summary sheet and that was it! (Trust me!) Many do not put their own call sign or address on their log. You have to be a detective and go through the other logs to figure out the "mystery" contester. Some handwritings would cause any graphologist to have a fit. (They must be doctors!) Some claim and swear they duped their logs, but then you see your own call sign in the log three times and you get suspicious. You'd dupe it again and you would find about 200 dupes out of about 2400 QSOs (!). That declaration on the summary sheet should be taken a little bit more seriously. To check the logs is a thankless task and the life of the log checker should be made as easy as possible. He has a lot of logs to do. We have only one we are submitting. Besides, it is also a picture of us, just like that QSL card or our signal on the band. So let's do it better and right!

I have seen other methods of logging and duping and after some experimentation, I found the following one the most suitable. I have to say that my eyesight is still O.K. and I can write and read small letters (can't you tell by the magazine? Hi). This is the most important requirement if you are trying to fit a lot into a small space. With my method, all I have on my operating table is: log sheets, three dupe sheets, and a multiplier card. The rest is radios. The log and dupe sheets are 8.5 by 11 inches (A4 format).

Logging is the most important part of our bookkeeping operation; it is a record of what we are working. I have modified the log pages so we can reduce amount of paper used (staaaand by, let me change the log page!). It's easier on postage too.

The log page is divided vertically into two halves, each with 50 lines for the contacts. (See the page with examples.) The thicker lines are used after each 10 QSOs for ease of counting the QSOs. This also means that each page holds 100 contacts and the addition of QSO points is made easy. I usually mark only 0 pointers (dupes and own country) and 3 pointers (the other continent). The rest of it is two pointers. Addition of points is then easy: you take out or cancel two 3 pointers for each zero pointer, then you add up "left over" three pointers (one point for each), and that number is then added to 100, which represents the 50 two pointers. Also, the valid QSOs (including own-country zero pointers) are added up at the bottom of the column as well as zones, countries or whatever multipliers are used.

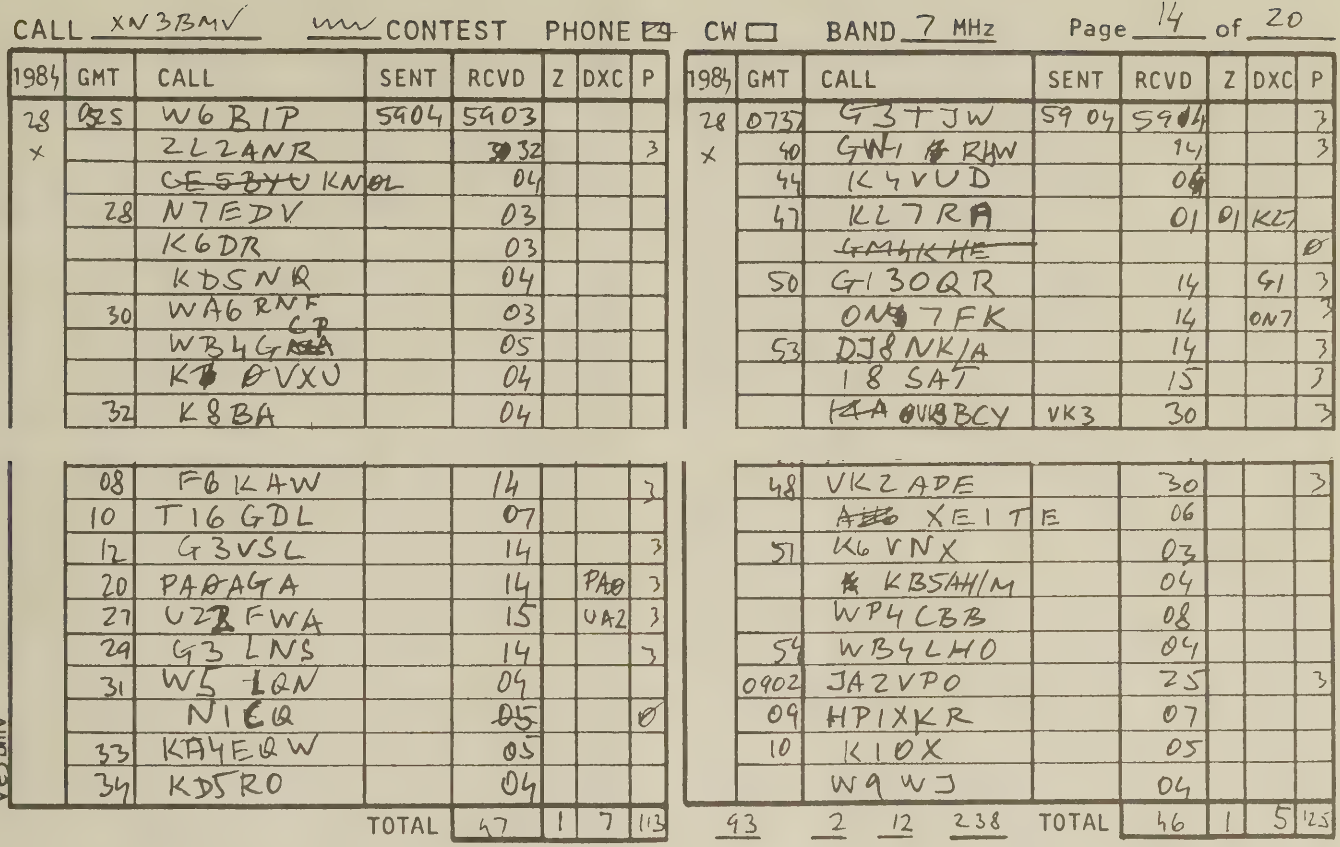
The top part of the log sheet has some information about the contest and it is needed! Many do not fill it in. But it happens that log sheets get separated (just like people do) and then you have to play graphologist to find out which sheet belongs to whom. So label each column with your call sign, what contest , phone or CW, band, and page number of so many pages (e.g., page 3 of 6). I have seen WPX Contest logs showing up among CQ WW logs, so it helps to put that stuff on.

The information entered about the contacts should have the date entered once per page. The time should be entered at least every three minutes. I usually do it every two minutes, I favor even minutes for some reason. The hour is entered on the top of the page or when there is a change in hour. Then the minutes can be entered as a two-digit figure.

The call sign should be writen clearly and legibly. It is the most important information, after all. Changes should be made by crossing out the wrong letter and writing it above or on the side. The call sign column is wide enough to accommodate two call signs if needed.

The report sent, if it does not change (59904), is written once on the top of the page. If I give a report other than 599, I would write it down on the line corresponding to the station worked. If nothing is written, it is assumed that it was 59904 or whatever is on the top of the page. The report received: again, if it is 599 I do not write it; if different from 599, then it is entered. Only the rest of the exchange, zone number or QSO number, is written down for each QSO. If you worked a page of JAs all with 59925, then you could ommit that, providing you mark it on the top. I usually write it down every time to indicate QSO was made and exchange done.

The next two or three columns are devoted to indicate when station is a zone and/or country multiplier. It is entered for each NEW multiplier, that is, the first station from that particular country or zone. The points are usually filled in



CALL XN3BMV WW CONTEST PHONE ☒ CW ☐ BAND 7 MHz Page 14 of 20

1984	GMT	CALL	SENT	RCVD	Z	DXC	P
28	0725	W6BIP	5904	5903			
x		ZL2ANR		32			3
		~~GE5BYU~~ KN0L		04			
	28	N7EDV		03			
		K6DR		03			
		KD5NQ		04			
	30	WA6RNF		03			
		WB4GCP		05			
		K[illegible]0VXU		04			
	32	K8BA		04			

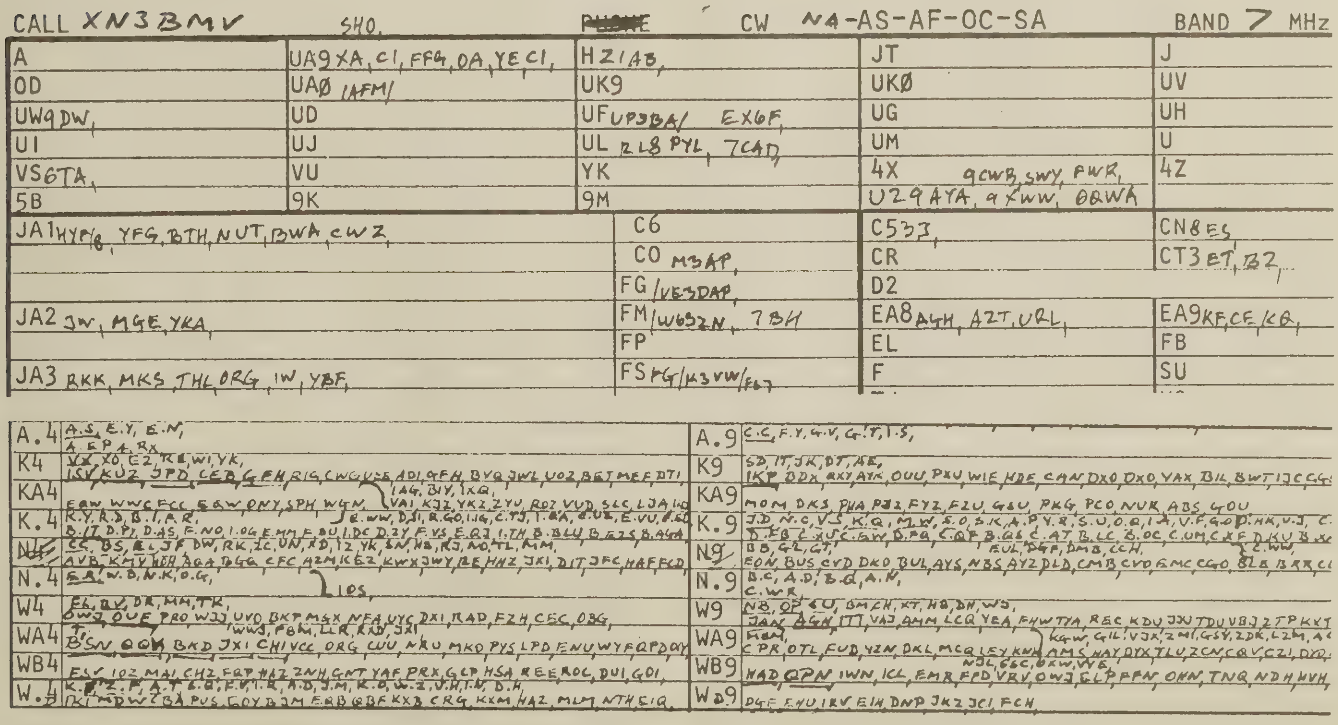
1984	GMT	CALL	SENT	RCVD	Z	DXC	P
28	0737	G3TJW	59 04	59[illegible]4			3
x	40	GW1[illegible]RHW		14			3
	44	K4VUD		0[illegible]			
	47	KL7RA		01	01	KL7	
		~~GM4KHE~~					0
	50	GI3OQR		14		GI	3
		ON[illegible]7FK		14		ON7	3
	53	DJ8NK/A		14			3
		I8SAT		15			3
		~~K4A~~ VK3BCY	VK3	30			3

1984	GMT	CALL	SENT	RCVD	Z	DXC	P
	08	F6KAW		14			3
	10	TI6GDL		07			
	12	G3VSL		14			3
	20	PA0AGA		14		PA0	3
	27	UZ2FWA		15		UA2	3
	29	G3LNS		14			3
	31	W5LQN		04			
		N1EQ		~~05~~			0
	33	KA4EQW		05			
	34	KD5RO		04			
			TOTAL	47	1	7	113

ve3bmv

1984	GMT	CALL	SENT	RCVD	Z	DXC	P
	48	VK2ADE		30			3
		~~AE0~~ XE1TE		06			
	51	K6VNX		03			
		KB5AH/M		04			
		WP4CBB		08			
	54	WB4LHO		04			
	0902	JA2VPO		25			3
	09	HP1XKR		07			
	10	K1OX		05			
		W9WJ		04			
			TOTAL	46	1	5	125

93 2 12 238



CALL XN3BMV SHO. ~~PHONE~~ CW NA-AS-AF-OC-SA BAND 7 MHz

A	UA9 XA, C1, FFG, DA, YE C1,	HZ1AB,	JT	J
OD	UA0 1AFM/	UK9	UK0	UV
UW9DW,	UD	UF UP3BA/ EX6F,	UG	UH
UI	UJ	UL RL8PYL, 7CAD,	UM	U
VS6TA,	VU	YK	4X 9CWB, SWY, PWR,	4Z
5B	9K	9M	U29AYA, 9XWW, 0QWA	

JA1 HYF/8, YFG, BTH, NUT, BWA, CWZ,	C6	C53J,	CN8ES
	CO M3AP,	CR	CT3 ET, B2,
	FG/VE3DAP,	D2	
JA2 JW, MGE, YKA,	FM/W6SZN, 7BH	EA8 AGH, A2T, URL,	EA9 KF, CE, KB,
	FP	EL	FB
JA3 RKK, MKS, THL, ORG, 1W, YBF,	FS FG/K3VW/FS7	F	SU

A.4	A.S, E.Y, E.N, A.EP, 4.RX	A.9	C.C, F.Y, G.V, G.T, 1.S,
K4	VX, XO, EZ, RE, WI, YK, ISV, KUZ, JPD, CEB, GFH, RIG, CWG, U-B, ADI, GFH, BVQ, JWL, UOZ, BET, MEF, DTI,	K9	SD, IT, JK, DT, AE, IKP, DDX, AXY, AYK, OUU, PXU, WIE, HDE, CAN, DXO, DXO, YAX, BIL, BWT, IJC, CG
KA4	1AG, BIY, 1XQ, EGW, WWC, FCC, EGW, ONY, SPH, WGN, VAI, KJZ, YKZ, ZYU, ROZ, VUD, SLC, LJA	KA9	MOM, DKS, PUA, PJZ, FYZ, FZU, GAU, PKG, PCO, NUK, ABS, GOU
K.4	R.Y, R.D, B.I, A.R, E.WW, D.SI, R.GO, I.IG, C.TJ, I.BA, E.UZ, E.VU, B.IT, D.PY, D.AS, F.NO, 1.OG, E.MM, F.BU, I.DC, D.ZY, F.VS, E.QJ, I.TH, B.BLU, B.EZS, B.AGA	K.9	J.D, N.C, V.S, K.Q, M.W, S.O, S.K, A.P, Y.R, S.U, O.Q, I.A, V.F, G.O, D.HK, V.J, C. D.FB, C.XUC, GW, D.PQ, C.QF, B.QS, C.AT, B.LC, B.OC, C.UM, C.XF, D.KU, B.X
~~N4~~	CC, BS, EL, JF, DW, RK, IC, UN, XD, 1Z, YK, SN, HB, KJ, NO, TL, MM, AVB, KMY, WBH, AGA, DGG, CFC, AZM, KEZ, KWX, JWY, BE, HHZ, JXI, DIT, JFC, HAF, FCD,	N9	BB, GL, GT, EUL, DGP, DMB, CCH, C.WW, EON, BUS, CVD, DKD, BUL, AYS, NBS, AYZ, DLD, CMB, CVD, EMC, CGO, BLB, BRR, C
N.4	E.R, W.D, N.K, O.G, 1OS,	N.9	B.C, A.D, B.Q, A.N, C.WR,
W4	EL, QV, DR, MM, TR, OWJ, OUE, PRO, WJJ, UVD, BKP, MSX, NFA, UYC, DXI, RAD, FZH, CSC, OBG,	W9	NB, OP, EU, BMCH, KT, HB, DH, WS, JAN, AGH, ITT, VAJ, AMM, LCQ, YEA, FHW, TYA, REC, KDU, JJU, TDU, VBJ, ZTP, KXT
WA4	F, WWJ, FBM, LLR, KND, JXI BSN, QQK, BKD, JXI, CHI, VCC, ORG, CUU, NKU, MKD, PYS, LPD, ENU, WYF, QPD, QY	WA9	FBM, KGW, GIL, VJX, ZMI, GSY, ZDK, LZM, A CPR, OTL, FUD, YZN, DKL, MCQ, LEY, KNH, AMS, NAY, DYX, TLU, ZCN, CQV, CZI, DYD
WB4	ESV, 10Z, MAI, CHZ, FRP, HAZ, ZNH, GNT, YAF, PRX, GLP, HSA, REE, ROC, DUI, GOI,	WB9	NJL, GSC, OKW, VVE, HAD, QPN, IWN, ICL, EMR, FPD, VRV, OWJ, ELP, FFN, OKN, TNQ, NDH, NVH,
W.4	K.Z, F, A.T, 6.Q, F.V, 1.R, A.D, J.M, K.O, W.Z, V.H, T.N, D.H, IKI, MDW, ZBA, PUS, COY, BJM, ERB, QBF, KXB, CRG, KXM, HAZ, MLM, NTH, EIQ,	WD9	DGF, ENU, IRV, EIH, DNP, JKZ, JCI, FCH

at the end of the contest, during the second pass of duping. During the contest I usually write 0 in the points column if it is my own country QSO.

I usually dupe during the contest as I go. I write the calls of stations worked directly into the log, not on scratch paper! If I find it was a dupe, I cross it out, and write the next call right next to the scratched call sign.

When the page is completed, you know you have finished another 100 contacts, and you can add up the multipliers and write down the number on the multiplier card to keep the running total. The total multiplier count is a sum of both column totals and is written on the bottom of the page, between the two column totals.

I usually keep about 10 - 15 log pages held together with a spring clip. If you are making your own copies of log page forms, you can fill in the headings and then make the copies; it will save you some writing during the contest (or after).

There are three types of dupe sheets, divided by major areas of ham radio population. One is used for the U.S. only, and it is divided by the call areas and accommodates all the new prefixes very nicely. Personally I like to see at a glance whom did I work (what area) and where there is a big void. I try to avoid not working W6s or any other important concentration of hams. The "new" US prefixes are accommodated with a minimum amount of writing required. Each call area is divided into 10 lines. Each line is used for a certain group of calls or prefixes. E.g., AA1K is writen on the line marked "A.1" and this call is written as "A.K," - the A fills the first dot in the prefix (makes it AA1) and the K is the suffix - all together AA1K. The good old prefixes like W1, WA1, K1, etc., have their own line. Although the situation with call sign distribution is changing, this system gives fairly even distribution. To speed up the search, I also write two rows of calls into one line. E.g. in the "K1" line, the top line would have two-letter suffixes (XA,BW,ZX, - always write the comma after the suffix) and the bottom line three letter suffixes (VUT,FWE,). This speeds up the search. Similarly, with, for example, the "K.1" line, the top has single-letter suffixes (S.L,E.C,R.G,) and the bottom has two- and three-letter suffixes (B.FJ,A.CV,). As you can see, the suffixes are separated by the commas, where dots or periods represent the "missing" number in the prefix. This system allows me to keep the size of the dupe sheet reasonable and it also allows me to see the geographical distribution of the contacts while minimizing the amount of writing required to enter each call. There are other systems used, some using the last letter in the suffix, or the first, but this usually requires writing all the letters of the call sign minus one letter, and does not give you distribution of stations worked. So one sheet is used to dupe just the U.S. and Canada (this dupe sheet and the log page are included in the sample kit for the CAN-AM Contest).

The second dupe sheet is dedicated exclusively to Europe. It is also broken down by the prefixes and countries in alphabetical order. The more active countries are broken up by individual prefixes. Some would have two lines (like G3) per prefix. This is usually based on the average picture from the last few contests. It is interesting to see the picture of CW vs. SSB contests - the difference in the density and distribution of stations.

The third dupe sheet has the rest of the world on it. Again it is subdivided by continents and the most common countries, and prefixes listed in alphabetical order. On the top of the sheet is Asia, with JAs having the left vertical side of the form. Parallel with JAs are the rest of the North Americans except W/VE. On the right-hand side we have Africa on the top, with oceania in the middle and South America in the right-hand bottom corner. This way again we can see if we are "neglecting" any particular area. It also shows some "regular" prefixes or countries missing, so we can chase them.

This system should be fairly useful for just about anybody. It accommodated the good old days on 15 m, when the whole world was roaring in, even 1000 or so JAs. The change in the prefix allocation (like USSR recently) has to be included. The next format will go on the word processor on the computer, it will be easy to make the changes and run the new forms on the copier.

Write on top of the dupe sheets your call and contest name/mode and band information, just in case they get separated from the log.

As far as actual writing goes, here are some tips: Do not use pencil, do not use ball point pen. The pencil wears out and you have to resharpen or exchange it, the ball point is a pain in the neck. It will curl your log sheets, dries up, and you have to press it hard (like the pencil) and you can't write small letters with it. Use fine point felt pens. Very light pressure is required to write, they maintain their thickness, and when you start a new one, it will last you throughout the contest. and won't dry up. You can write something the size of a small flea with it and your wrist does not get unwound from the pressure, as with pencil and ball point pen. The placement of the paperwork on the operating table is important, too. You want to minimize your movements (some are actually good for you, to keep your blood circulating) so the log sheet should be right in front of you. To the right, I keep the most needed dupe sheet during the opening (EU dupe sheet when "running" Eu). To the left, immediately next to the log sheet, is the "next best" dupe sheet, and next to it is the least needed one. They would change their places as the band conditions swing. If things get to be too much to keep up with duping, you can forget the Ws or crowded European prefixes and keep duping only the more "juicy" ones. So if you forget who you worked, at least you can see that you worked the rare one and you don't have to get in the line-up again just to be told "QSO B4." When things slow down you can catch up with duping or just leave it after the test.

There are some special situations, when you would make, let's say, 6000 QSO on one band (it happened), then you probably don't care about duping G3, JAs, Ws and others, maybe even anybody. You would want to keep just the multiplier list. With rates like that, obviously the whole world is calling you and you are the lucky one somewhere in the Caribbean or Africa. But for us regular contest grinders operating from our own, not needed by anybody, countries, you are better off to keep track of all that stuff, because we have to do a lot of "digging" and you don't want to dig out something that you already have.

Another useful form is the multiplier card. I usually make it on a small size card and the countries are divided by the continents, to correspond with the dupe sheets and to preserve the "system." Also, zone numbers are written on the side. As each multiplier is worked and marked in the log, it is also circled on the multiplier card. This gives you a concentrated view of what you have and what you don't. The card is kept just above the log sheets, right in front of me. Has it ever happened to you that you really concentrate your thinking: "Boy, I sure could use the ZB2" and within few minutes there is the ZB2, or he even calls you on CQ. Last time I did this with zone 29 and worked 6 VK6s! In the previous two contests I couldn't hear one! (Who knows, maybe there is ESPsphere besides ionosphere.) That's what the multiplier card is for!

Sometimes the writing on the dupe sheets is so small that the copier won't pick it up! So there goes the master original with the logs and the blurred foggy image of the dupe stays home.

There is some problem with the definition of the dupe sheet. A lot of Europeans interpret it as: a list of the duplicates you worked. I wonder how they produce it. They first must make the list of stations worked and then each duplicate must be entered on the "dupe" sheet. So for our CW friends, strangly enough, the dupe sheet is a list of contacts made, with the duplicate contacts then just crossed out in the log and assigned 0 (zilch, nula, zero, nothing, nol, nichevo) points. I have seen the logs where duplicates were listed on the sheet but you could not find them in the log, they all had 3 points! How nice!

After the contest I usually dupe the logs again, this time with red color felt pen (fine tip), and underline each suffix as I go. It is surprising, but you still find some dupes, and missing calls. Some times you find, e.g. VP9LB in the log and VP9BL on the dupe sheet, or W2CMH and W2CHM. Now who the devil is who? The guy in the log should be more right. Or you are just finishing writing one on the dupe sheet and another one calls you, you put him on the dupe sheet and forget to put him in the log. Then you have an orphan on the dupe sheet with nowhere to go. You have to remember that when we get tired, (and a contest is a perfect example of sleep-deprivation types of torture), our mind can start wandering out of our conscious control. It has happened to me and to others; you start blabbing something, or keep calling QRZ when there is a pile-up calling you. I guess it is up to us to know our limits and try not to get into a state like that. Have you ever listened to the "after contest net" around 3.830? It is a wonderful example of tired contest machines trying to switch to regular talk, and they are cracking up. It is really something to listen to.

It is helpful to supply, with your contest entry, also your "working" sheet, where you add up page totals, etc. This helps log checkers tremendously, so include your multiplier card and page totals with the package.

The last important piece of documentation is the summary sheet. It should be filled in in all columns. And please use the official forms supplied by the sponsor. It helps and speeds up processing tremendously. When the logs are being sorted, it is much easier to look at something familiar and at the same spot on the form (call, category, score) than trying to find something that is not there.

The score calculation and breakdown of band totals should be filled in.

Some people use the charts showing their hourly rates, also comparing them with last year's charts. It can give you an idea when to expect "runs" and when hunting is in order.

Most important of all, read the rules BEFORE the contest, so you are not surprised afterwards! There might be some changes and which make you Multi-Multi instead of Multi-Single, which is a big difference. Also pay attention to how the score is calculated. I have seen people calculating their monoband scores and then adding them up in the CQ WW contest. You deprive yourself of precious points. So try to make it as easy as possible for the log checker. He is the poor sucker doing this for nothing, just out of love for contesting. A little bit of extra effort on our part can add up to a lot less work for him.

Mail the log before the deadline, although when there is good excuse, an extension can be granted. Do not send logs registered mail, unless your post office eats them. Include a return card with your address and include return postage with your entry. When the sponsor receives the logs, he will mail you that card back and you know it was received O.K. Otherwise, it is a pain, in the line-up, to go to the post office and sign the book for 1000 registered mail logs. Put your card in, especially when your log is a good high scoring one. Some logs get lost or go astray. It would be too bad to lose it.

Then you sit and wait, and wait. Then you see the high claimed scores in the magazine. You might be in there or not. It does not mean that your log did not make it. It just could be that you were No.2 or so in the country and they put in just some typical logs. And then you wait more, and more, and by the time you forget there was a contest, the results will show up in the magazine. Then you are either pleased or disappointed, depending on where you ended up. Then the next running of the contest comes, we get excited again, go up and down the towers, get the new killer antenna up, and show those above us this time! There we go again! We love it, even if it kills us!

Real time logging on the computer helps tremendously. Producing the QSL cards after that just about equals to pushing the button. It is all in there. Oh well, maybe next time! (Have to learn touch typing in the mean time.)

The last advice: even if you are not terribly serious about the contest, please send your log in, even if as a check log without the calculations, dupe sheet, etc. It helps the sponsor to check the other logs. It is also nice to see your call in the results. At least we know you are still around. Don't be ashamed of your small score. You were a big help to many others, who without your contact wouldn't be able to beat that record or just say hello to you. In the contest you can say hello to lot of guys without being forced to listen to their weather report. Hi!

See you down the contest log! (VE3BMV)

(For those who are interested in obtaining samples of log, dupe, summary and multiplier sheets, please send business size Self Addressed Envelope and $1 per set to: IRSA, Box 65, Don Mills, ON, M3C 2R6. We have sets available for CQ WW, CQ WPX and CAN-AM contests.)

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***************************************************
*     WHAT THEY KNOW TODAY,                       *
*                                                 *
*                 WILL HURT YOU TOMORROW!         *
*                                                 *
*            (The saying around Tuxedo Park)      *
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IN MEMORY OF

DR. JIM LAWSON, W2PV

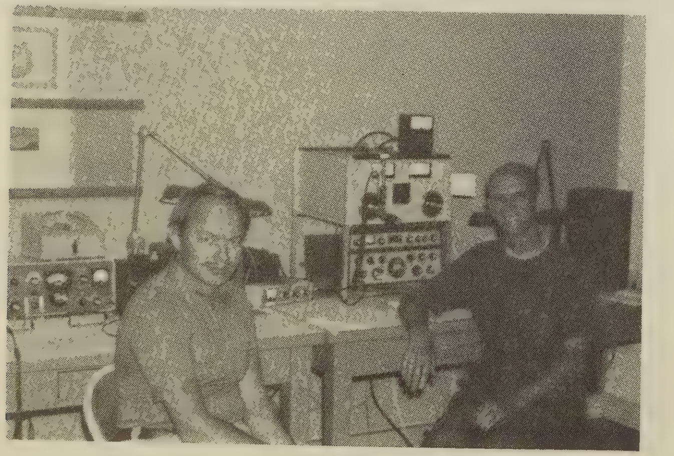
The late James L. (Jim) Lawson, W2PV, received his A.B. degree from Kansas in 1935, his A.M. degree in 1936, and his PhD from the University of Michigan in 1939. He was employed as a research physicist at the University of Michigan (1939-1940); a staff member at the Radiation Laboratory, Massachussets Institute of Technology (1940-1945); at the Research Laboratory General Electric Co. (1945-1965); and also at the Corporate Research and Development, Gen. Electric Co. (1965-till retirement). Jim was also a Fellow of the American Physical Society and a Senior Member of the I.E.E.E.

Jim Lawson was first licensed as W9SSO in 1934, W8QIU in 1936, WA2SFP in 1961, and finally as W2PV in 1972 - the famous - Papa Victor.

Besides being an amateur, few are aware of the fact that Jim was also an avid mountain climber. He scaled a number of known peaks such as Kilimanjaro and Mont Blanc.

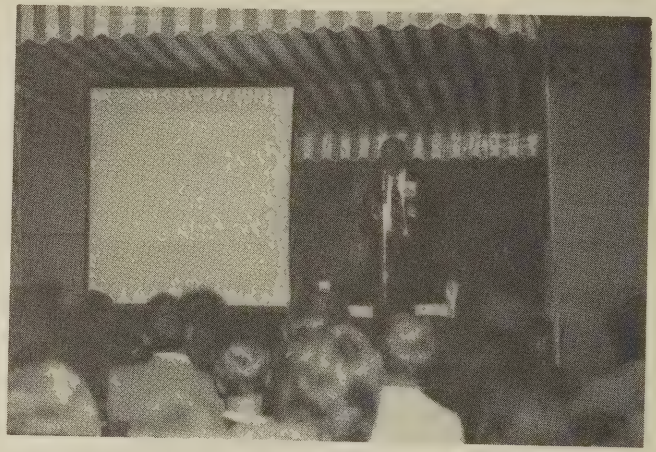
Those that new Jim will always remember him as a kind, friendly and helpful individual who was always willing to share his experiences and knowledge. Many use the Yagi antennas that W2PV designed.

Jim was perhaps the most prominent figure in amateur radio contesting. He was a giant among giants. The Multi - Multis. His approach to contesting can be characterized as a "clever" rather than a brute force. He has done a considerable amount of work in the field of antenna design, simulation, computer analysis and optimizing. He had "only" three towers, but they were very well thought out. His antenna farm was the most effective in his days. His results in the contests were proof of that. He often beat the stations with more hardware. Jim realized that the most important part of the DX and contest station is the antennas. He spent a considerable amount of time studying, analyzing and modelling various designs on the computers and then verifying them in practice. If anyone "took the Yagis appart", it was W2PV. He refined the formulas to include the effect of the clamps and the taper on the elements. I remember Jim's signal when I was still in Europe. W2PV was the "beacon" on the band.



VE3BMV visiting W2PV (right)

Many hams looked forward to meeting Jim at the Dayton Hamvention. He would talk with us about the different problems contesters faced. His station was always operated in the spirit of fair-play and sportsmanship. The crew he assembled for the multi-multi contest operation was always tops and the people were proud to participate.



W2PV speaking on antennas at Dayton Hamvention

Despite his workload, he continued to work on the improvements of his station. All the switching, filtering and modifications of the radios right from the antenna relay down to re-designing the Alpha amplifier, were never ending projects. The whole station was a gem as far as design and optimization of available space and resources go. Most of the work was done by Jim himself with some help from the operators. He climbed the towers until the illness prevented him from doing so.

Jim was a true and complete contester. Behind the W2PV call stood Jim, the station that he designed and built, and of course the crew that assembled to operate the biggies. A person who can combine all the required elements is very hard to beat. There is a bit more to successfull contesting than just buying the best and biggest. It takes knowledge, skill and alot of devotion.

Jim looked forward to his retirement. He wanted to devote more time to all those things that his professional commitments did not allow. He wanted to write about his work and experiences. When he retired, he first cleared some of the backlog mail, and then wrote a series of articles that were published in the Ham Radio Magazine.

A few years after his retirement Jim became very ill. He never recovered from his illness. The amateur community and especially the contesters lost a great man, amateur and a friend. His towering image will always stay in our memories.

Jim's station was up for sale for a while. Unfortunately, there wasn't anybody who wanted to save and preserve this monument of love for our hobby -- contesting. All is left, are memories and pictures, together with a permanent record of W2PV's achievements on the pages of the contest results. Jim began as most of us do - with a simple station and dipoles. Through his dedication and hard work he managed to build a super-station which became a legend. He is an example to many young amateurs: if you decide to do something, you can do it!.

To get a glimpse at what was assembled at that suburban three acre lot, let's have a look into a not so distant past. John Dorr, K1AR, and Bill Myers, K1GQ - frequent operators at W2PV - summarized it very nicely in the following article published in the Yankee Clipper Contest Club (YCCC) newsletter, The Scuttlebutt:

This article describes one of the most extraordinary Amateur Radio stations in the world. You mey be thinking to yourself, "who cares, I can never build a station like that." True, but you should read on anyway, because there are lessons to be learned by all of us from the approach Jim chose for the demanding arena of multi-operator/multi-transmitter contesting.

The most obvious feature of any Amateur Radio station is, of course, the antennas. Here is a list of the HF antennas at W2PV:

160 meters - inverted Vee at 170 ft.
80 meters - 2-el quad at 160 ft.
- low and high dipoles
40 meters - 3/3-el Yagis at 180/90 ft.
- 3-el at 85 ft.
20 meters - 7/5/5-el Yagis at 150/100/50 ft.
- 6/6-el Yagis at 106/42 ft.
15 meters - 8/8-el Yagis at 99/49 ft.
- 4/4-el Yagis fixed south
10 meters - 10/10-el Yagis at 70/40 ft.
- Beverages for 160/80 meters

View of the W2PV antenna farm

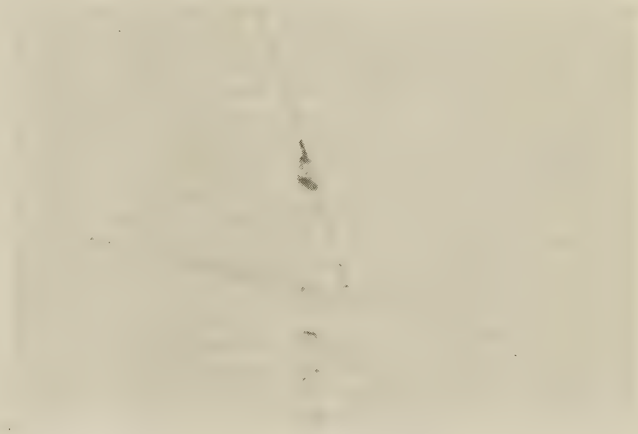
There are several stations with more antennas than listed here, but as will be seen, the PV system is engineered for maximum effectiveness in the contest environment. Furthermore, each antenna was carefully evaluated after installation to be sure that it was performing as expected. For example, the commercially-designed 3-element 40-meter Yagis required drastic adjustments of the element lenghts to achieve proper operation.

Inside, the operating positions for the six bands are divided between two rooms. The 40-meter and 15-meter positions are upstairs in the den, while the other four bands are downstairs in a large room which also serves as an electronics lab and operations center. The modus operandi for these positions is best explained one band at a time.

The 160-meter position is least complex, since the only transmitting antenna is the inverted Vee. The Beverage receiving antennas are shared with the 80-meter position through separate matching networks.

Jim found that the commonly-used toroidal transformer matching systems could not be used at his QTH because nearby broadcast stations generated enough voltage on the Beverage to saturate the cores and cause severe intermodulation. So, his Beverage matching networks look like low-power antenna tuners.

In addition, a filter is installed in the receive antenna line to eliminate interference form the BC stations. The rig at the 160-meter position is a Signal One CX7A with an ETO Alpha 76 amplifier.



3-el. 40 m Yagi and support boom for 80 m loops

The 80-meter position has a choice of two transmitting antennas - the quad and the dipole at about 140 feet. The quad fires toward Europe or southwest at the flip of a switch, while the dipole is broadside to South America. The low dipole (60 ft.) is available for SS by swapping some transmission lines.

Each of the 80-meter antennas has a remotely-controlled network at the feeding point to tune for either the Phone or CW end of the band. The rig at this position is a CX11 and Alpha 77.

In addition, there is a 75S3 spotting receiver which has its own antenna switch to allow listening on any antenna, independent of the one selected by the primary rig. Each reciver has an 80-meter bandpass filter, and the output of the apmlifier passes through another bandpass filtering, which reduces inter-station interference to nil.

The 40-meter position includes a primary station with CX7A/Alpha 77 and a 75S3C spotting receiver. The antennas are the 3-element Yagi on the Bertha, and the two Yagis on the 180 ft. tower. The latter two antennas can be selected separately, or driven together in-phase or out-of-phase.

The lower antenna of the stack is fixed toward Europe: in addition to the usual application of stacking to control wave angle, the "both" mode with the top antenna toward VE3 is effective for digging out daytime QSOs in the CQ WW by spraying

RF toward VE1, 2 and 3, all at the same time. The rotator control box for the Bertha is located where either the 40-meter or 15-meter position can reach it, so the Bertha after the 15-meter position shuts down at night.

The 20-meter position has two complete stations. The primary rig is another CX7A/Alpha 77 combination, and the secondary rig is a CX7A and Alpha 76. The primary station has a selection of the stacked 6's on the Bertha, stacked 5's (KLM) fixed toward Europe, and the 7-element at 150 feet.

The stacked 5's and the 7-element Yagi can be driven together, which allows CQ'ing toward both Europe and Japan during the morning opening. The antenna switching is interlocked so that the secondary station automatically transmits on the antenna system not in use by the primary op (i.e., Bertha or stacked 7/5/5).

In addition to the rotor control box for the 7-el Yagi, the 20-meter position has a remote readout showing the direction of the Bertha arrays. Using the intercom discussed below, the 20-meter position can easily ask 40/15 to turn the Bertha if needed.

The 15-meter upstairs uses either the stacked 8's on the Bertha or the stacked 4's fixed south. This position is the boss of the Bertha rotator, and with some changes of in-coax connections, it serves as the focus for single-operator activities. Like 20-meters, 15 has two complete stations, a CX11 and Alpha 77 primary rig, and a Drake TR-7/Alpha 76 secondary station.

Finally, the 10-meter position has the side mounted 6's as the primary antenna system, and can also use the pair of 10's on the Bertha. (There is another remote Bertha position indicator at the 10-meter position). The gear on 10 is a CX7A and Alpha 77.

You may have noticed the recurrence of "CX7/11" and "Alpha" in the description above. In addition to those listed, there is a backup Alpha 77, a backup Alpha 76 and a TS830. All of the gear is modified for the particular rigors of multi-multi. For example, the Signal One radios normally operate in full break-in mode on CW which quickly uses up the limited lifetime (number of cycles) of the expensive vacuum relays in the Alpha 77's. So, the PV CX7/11s are modified to operate in the typical semi-break-in mode.

Another example: the Alpha 77's have RF detectors which are used to prevent hot-switching of the relays. In the multi-multi environment, these detectors can sense the signal from another rig and incorrectly lock out the amplifier. The PV Alphas are modified to prevent this effect.

A key component of the multi-op set-up is the use of CB radios at each postion for inter-position communications. Each band is assigned its own channel; for example, 80 meters=1, 40 meter=2, etc. Thus the 40-meter position can talk directly to the 80-meter operator (perhaps to pass a multiplier) without bothering any other position, merely by dialing up channel 1. In addition, the operations center mentioned above monitors channel 0 and the 2-meter spotting nets.

Multipliers are passed out on the net from any position by announcing it on channel 0 (again without bothering other positions), while multipliers extracted form 2 meters are piped directly to the appropriate position on its private CB channel.

The audio from the CB set is mixed with the audio form the primary receiver, along with the audio from a CQ tape deck with switches to cut out any source momentarily when necessary. This audio box and another for the second receiver also include switching, which allows either operator to listen to the other operator's audio. This is especially helpful when two pairs are needed to dig out an inaudible signal, or when the spotting receiver has found a multiplier operating split-frequency.

Often, an operator will bring his own transceiver to use in place of an existing rig, for one reason or another. The interfacing problems are minimal because every position uses exactly the same connectors, and because each cable is thoroughly documented. The importance of documentation cannot be overstressed. A station of this complexity involves considerable maintenance, which is enormously compounded if the systems being maintained are not well described on paper.

For example, last fall, the 160-meter inverted Vee was found to exhibit unusually high SWR. With time-domain reflectometry, Jim was able to localize the problem to near the feedpoint, at the top of the 180 ft. tower. From his notebooks, he determined the length of the jumper cable from the feedline to the balun, the type of connectors on the jumper, and the type of balun. With the proper jumper and balun on hand, only one trip up the tower was needed to repair the problem (a connector frazzled by a lightning hit).

Just before the next contest, the 80-meter quad failed to switch to CW, which made the antenna useless due to high SWR. The documentation of the control wiring included resistance between each pair in the cable, so that it was possible - by measurements at the station - to determine that a particular wire was broken, and that the broken wire was between the station and the tower base. Again, one trip up the tower to connect a temporary jumper at the quad switchbox solved the problem.

This activity over the years built up a circle of friends both locally and around the world. The local hams enjoyed spending the contest weekend searching the bands for multipliers to pass on 2 meters or helping out with the less glamorous operating chores at W2PV, suh as manning 75 during the day. And the DX acquaintances searched the bands looking especially for PV, often volunteering to band-hop for additional points and multipliers.

In summary, the strong point at W2PV is the lack of weak points. The only problem area is the occasional line noise. The QTH is located on a major highway, complete with high-voltage power lines, in a well-developed residential neighborhood. Although the property is more than three acres, there remains enough nearby man-made noise to sometimes degrade signal-to-noise ratio.

One final note about W2PV which has nothing to do with the station at all. A contributing factor to the sucess at W2PV over the years was Jim's wife, Mollie. Anyone who has ever operated form W2PV can attest that Mollie was one of the nicest people you could ever meet. She became famous among the W2PV contest crew for her "contest stew" and never empty icebox. Even more significant than "feeding the boys" was her smiling face, and her willingness to be a part of a group of crazy people who were the best at what they do and doing it at the best place in the world.

In all, W2PV won an incredible number of awards, finishing his contest career by placing first in the world in the 1981 CQ WW CW contest in the multi-multi category (standing All-Time U.S. record)! A fitting end to a station built on technical excellence, superb operating and integrity. It will be always remembered that way. +

International Radiosport Association announces:

WCC — WORLD CONTEST CHAMPIONSHIP

OBJECTIVE: To promote operating in major international contests and to provide a measure of performance and versatility for Amateur Radio operators throughout the world.

ELIGIBILITY: Any licensed radio amateur in the world. No submission of scores or application for participation is necessary.

CATEGORIES:

1. SINGLE OPERATOR, ALL BAND
2. SINGLE OPERATOR, SINGLE BAND
   160, 80, 40, 20, 15, 10 M.
3. MULTI OPERATOR, SINGLE TRANSMITTER
4. MULTI OPERATOR, MULTI TRANSMITTER
5. QRP LESS THAN 10 WATTS OUTPUT
6. OUTSTANDING CONTEST ACHIEVEMENT

1. SINGLE OPERATOR stations must be operated in selected contests by the same person during the calendar year using the same call sign from one country.

2. SINGLE BAND category competitors will be evaluated on each of six bands. The operator must use the same call sign and operate the same band during the calendar year.

3. MULTI OPERATOR categories are defined by the criteria used by CQ Magazine.

GENERAL RULES: The WCC is run for each calendar year and points are assigned for placement in the selected contest. Only scores of stations with the same call sign and operating from the same country in the same category will be included in the calculation of WCC scores. To be included, the station must place among the top 20 stations in the world in the particular category.

SCORING: The top 20 stations in each category will be listed and assigned points according to their placement. The top station receives 20 points, the second one 19, etc. The last station receives 1 point. If there are fewer than 20 stations in a particular category, then the first station receives the number of points corresponding to the number of stations in that particular category, with the next one receiving 1 point less, etc. The winner will be the station having the highest WCC point count. In the case of a tie, the scores from the individual contests counted for WCC will be added up and used as a tie breaker. It is recommended that national championships are sponsored modelled on WCC using a selected number of top stations in each category or all participants from that particular country.

SELECTED CONTESTS:
The following are the selected contests during the calendar year:

1. **CQ WPX SSB Contest**
2. **CQ WPX CW Contest**
3. **CQ WW DX Phone Contest**
4. **CQ WW DX CW Contest**

For a contest to be included in the selection the following criteria will be observed: It should be a major international contest and not a country vs. the rest of the world. It should have categories similar to WCC - Single OP, Multi OP and Single Bands.

The results of contests included in WCC and their WCC scores will be published in RADIOSPORTING.

TROPHIES AND PLAQUES: Trophies and plaques will be awarded in the following categories:

1. WORLD CHAMPION
   SINGLE OPERATOR - ALL BAND

2. WORLD CHAMPION
   SINGLE BAND 160 METERS
   80 METERS
   40 METERS
   20 METERS
   15 METERS
   10 METERS

3. WORLD CHAMPION
   MULTI OPERATOR, SINGLE TRANSM.

4. WORLD CHAMPION
   MULTI OPERATOR, MULTI TRANSM.
   W2PV Memorial Trophy
   Sponsor: IRSA

5. WORLD CHAMPION
   SINGLE OPERATOR - QRP

6. OUTSTANDING CONTEST ACHIEVEMENT

7. US CHAMPION
   SINGLE OPERATOR - ALL BAND

Individuals, clubs and companies are encouraged to sponsor trophies and plaques for the winners. Additional categories will be created as sponsors of trophies come forward. If you wish to sponsor a particular trophy or award, please contact the WCC chairman at IRSA.

The trophies will be presented at the IRSA Annual Dinner during the Dayton Hamvention.

Actions and decisions of the IRSA WCC Committee are official and final.

W2PV ON ANTENNAS

PART 1

YURI BLANAROVICH, VE3BMV

The following is a transcription of the taped presentation given by the late Dr. Jim Lawson, W2PV, at the meeting of the Toronto DX Club and Ontario Contest Club.

Dr. Jim Lawson, W2PV:

Let me thank you all for a most hospitable introduction to this area. I have never been to Ontario before and it was really a very pleasant experience to come in. I must say that the roads weren't good in New York and they suddenly turned out to be very good here. My wife and I had a very pleasant introduction on the channel to the hams here as we were going to Martin's (VE3MR) place. I want to thank Martin and Truus (VE3MRS) for a very enjoyable day. What I'd like to do this evening is to discuss antennas from a conceptual point of view. It will be based upon mathematical simulation but I'll try not to use any mathematics anywhere, but to tell you a little bit how it came about.

I have been interested in antennas for a long period of time, antennas being the sort of one variable which amateurs really have to contend with at every location. I have been interested personally in both DXing and contests and the first thing that I want to say is that from the standpoint of high performance antennas, the two are a little different.

HIGH-PERFORMANCE ANTENNA SYSTEMS

DESIRABLE PROPERTIES	TRANSMIT	RECEIVE
GAIN (DIRECTIVITY)	X	X
FRONT/BACK RATIO		X
LOW-ANGLE RADIATION	X	X
BANDWIDTH	X	
EFFICIENCY	X	

The amateur who is interested in making the DX contacts doesn't necessarily have to have all the things you need as a contester. Contests are really a more demanding thing in some respects. I just put down some things here to illustrate what I mean. When you have a station with a high performance antenna you really have to do two things: you have to transmit well on the antennas so you can put a loud signal where the other guy is listening for you, and you want to receive well in terms of gain or directivity, really for the same reason, but also to keep out QRM that originates off angle. It's probably more important to have the transmitting gain than the receiving gain although under some conditions that is not true, but you need it in both cases. We will be talking about gain or directivity which is almost the same thing for antennas, because these are the most important perameters of your station.

On front-to-back ratio on transmit, you really don't care about that and the fact is, some contesters, they purposely make it rather poor to keep other guys off their frequency. Now that's, in a sense dirty pool but, when you get to receive that's not true. You want very good directivity because QRM is a thing that will kill you quite often. But they are diferent. You want different things in transmit and receive; it's not fully reciprocal.

Now I am going to put down low angle radiation. All of you fellows know that low angle radiation is the one thing people say is great to have and to some extent that is true. You will need it for very long distance contacts generally, but it is not always desirable. We will come back to that later.

The next is bandwidth. For a DXer you really don't care because you have lots of time, maybe five minutes or so, to get from your place to the contact. You can aim your antenna and you can do it. In a contest that's not true. You may have to switch from one place to the other and you don't want anything to have to be tuned except one dial. It's much more important to have broadband equipment. Now the broadband equipment is antithetic towards a lot of other things we do too. We like to have good filters to keep other transmissions out and that is not broadband. But, we would like to have a single knob tuning. More and more of our equipment is getting that way. But antennas have to be that way too.

Finally, we come to efficiency. Transmission efficiency is critical. Transmission efficiency directly affects how loud you're going to be at the location of the receiver. You're competing with others who are trying to do the same thing. On the other hand, in the case of reception, especially in the lower frequency bands, your antenna may not have to be efficient. As a matter of fact, many of you know that on 80 meters, one of the best listening antennas is a beverage antenna with very poor efficiency. It may in fact loose 10 dB or more. But the point is, if it loses signals and incoming noise at the same rate it won't matter. If it loses station generating noise then you're in trouble. A rough rule of thumb is: efficiency is important at very high frequencies such as 10 meters, but not at low. I bring this up to illustrate that we have different properties of an antenna that we are concerned with. Most people say, " what is it's gain?" and that is the end of it, but there are a lot of other things that are important. We will come to some of them as we go along.

ANTENNA TYPES	BANDS					
	160	80	40	20	15	10
YAGI-UDA		(X)	X	X	X	X
QUAD		(X)	X	X	X	X
LOG PERIODIC			X	X	X	X
SIMPLE DIPOLE	X	X	X			
INVERTED VEE	X	X	X			
SLOPER		X	X			
VERTICAL	X	X	X			
DRIVEN ARRAYS		X	X			

I am going to limit this discussion to most of the antennas which concern us in the ham field and which we are familiar with. The Yagi or Yagi-Uda antenna, first proposed a long time ago in 1926 by Yagi, and of course it has been later developed and theorized down by others, is a remarkably good antenna. It sort of wants to work, as you will see. It's easier made to work in general than driven arrays and so on. It's a wonderful antenna and it's no surprise that it has became very popular for amateurs.

That quad is really nothing very different, as we will see. It's a different way of making the elements but there is a way of looking at them, too, which is very similar, and of course whether you interlace quad and other elements makes a slight difference, but I will show you how to look at that little bit later.

They are used customarily on 40 through 10 meters by all amateurs and by a few amateurs on 80 meters, by those that can afford fantastically big rotational arrays, but they aren't many; maybe after Arnold, W2HCW, not even more than one or two others on the North American continent. But they may come in as people get used to it. Expense is involved.

Log-periodics have been suggested and are used occasionally on 40 through 10 meters recently because military models are available. I am not going to talk any more about log-periodics because fundamentally they have to be twice as big physically to get the same gain; the thing we were talking about and their front to back is not impressive either. However, if you need to have something that tunes over wide frequency range, there is nothing that is better than this kind of antenna. I think that so long as we are restricted to ham bands, the Yagi is a preferable thing in general. I can debate it, but I think it does not need much debate.

Now, there are simple dipoles that we use mostly at the low frequencies - 160 and 80 meters, probablly because it's hard enough to get up even a dipole or an inverted-Vee. Those simple antennas are used in those locations; possibly a sloper is used on 160 but I'm not aware of many, a loaded one perhaps. Occasionally one uses driven arrays of simple antennas at low frequencies. I'm sure that's one of the things we will be interested in.

One thing that has helped me enormously over the last few years is not to put up antennas, try them out, and see if I can work Timbuktu or something else, but to try to understand them. Now it's not easy to understand a system that you can't make a measurement on that's very accurate. How many of you guys have really measured the gain of your antennas? Do you know what it is? Yet, that is the most important parameter of your station. When you can't measure it, what happens? The manufacturer will overstate that gain generally. He may tell you his 3-element beam has 10 decibels of gain, and he'll get away with that because you can't measure. The fact is it doesn't have 10 dB of gain and we don't know why. But it doesn't mean that it is a bad antenna. It only means that for him to stay in business he has to misrepresent that number. He can not misrepresent the VSWR, because you can all measure it. Quite often, when you do measure it you are not as happy as you thought you would be. However, because you can measure the VSWR the manufacturer has to be more accurate about his figures.

I got interested in a simulation of an antenna that I have been able to do on the computers, which has some very significant advantages. For one thing you can explore a wide variety of configuration of elements, lenghts, boom lengths, and you can stack the antennas without ever puting the thing outside at all. You can get it done faster and you can get a conceptual idea of what is going on quicker. This has been one of the things that has helped me to understand antennas more than anything else in the last few years.

Originally, a theoretical model of a simple antenna and a simple yagi, was made a long time ago. You know, nothing is really new in this world. If you go and look the literature up, you will probably find that someone has done some fairly good work on this subject a long time ago.

(to be continued...)

KH6BZF

PROPAGATION REPORT

Statistical information is compiled by KH6BZF and processed on a computer by VE3BMV.

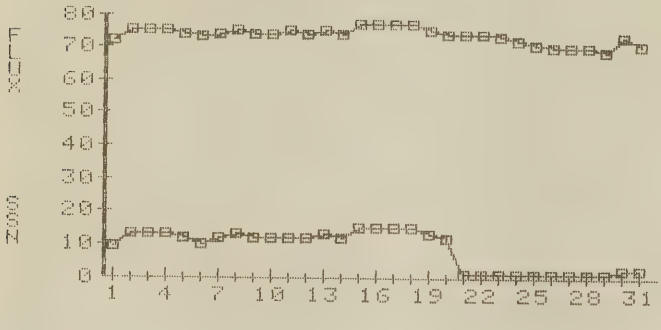
The first diagram shows the value of solar flux (top curve) and SSN - sunspot number (bottom curve). The X axis and scale is the same for both. The Y - axis is calibrated in days of the month.

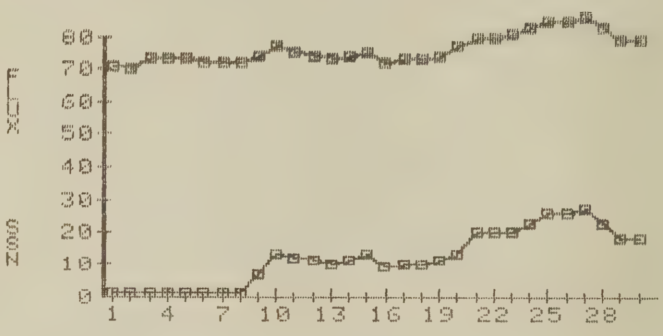
The second diagram shows variation of the Alpha Index for each day. The dark shaded area shows increases, while the white area shows decreases in the value of the Alpha Index for each day.

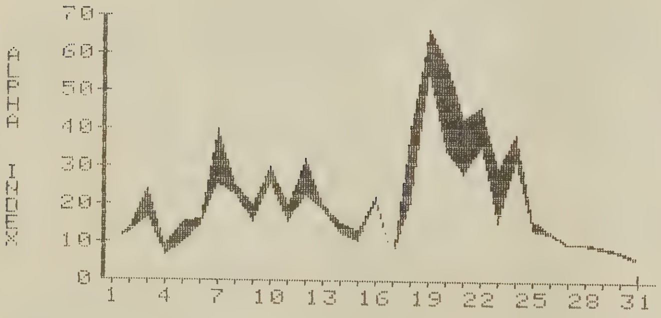
The third diagram shows the value of the K Index (shaded area) on a scale from 0 to 6. The dotted line represents the propagation quality where the scale is: from 5 = Above Normal to 1 = Disturbed.

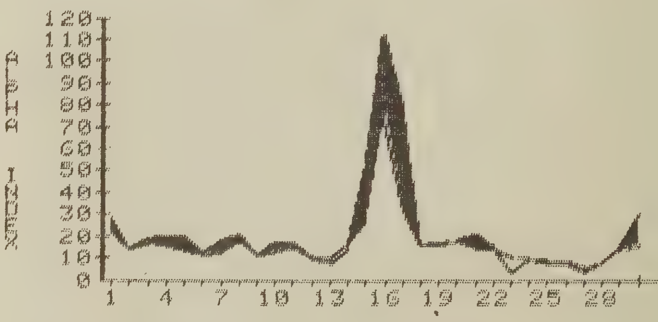
VOTE FOR NOBODY (Paid for and by the Friends of NOBODY)

* NOBODY LISTENS * NOBODY IS AN HONEST POLITICIAN 73
* NOBODY CARES * NOBODY WILL KEEP HIS PROMISES
* WE NEED NOBODY * NOBODY'S VOICE WILL BE HEARD ALOHA...
* NOBODY IS FOR THE PEOPLE
"...and that's our (Political) thought from RAINBOW BAY....
THANK YOU FRIENDS OF NOBODY FOR YOUR SUBSCRIPTION....." KH6BZF

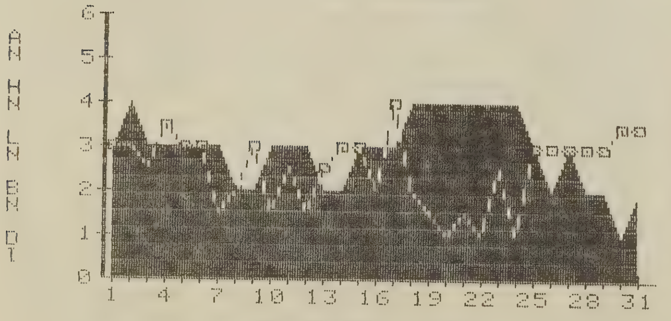






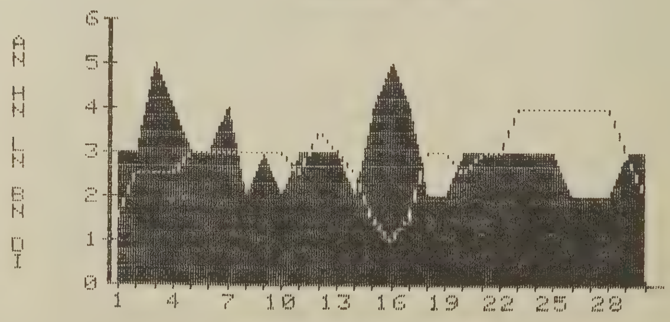


K INDEX/CONDX



OCTOBER 1984

K INDEX/CONDX



NOVEMBER 1984

(DATE)	(FLUX)	LEVEL	(OUTPUT)	(SSN#)	(GEOMAG Lvl)	(ALPHA INDEX)	(#K-INDEX)	(REMARKS)
OCTOBER 1984								
01	LN	072	VY LOW	(009)	UNSETTLED-ACTIVE	10/09	#K=3	
02	LN	075	VY LOW	(013)	" " " "	12/NR	#K=4	
03	LN-BN	075	VY LOW	(013)	ACTIVE-M.S. Lvls	16/--	#K=3	#K=5@0600-1200 UTC
04	LN-HN	075	VY LOW	(013)	UNSETTLED-QUIET	06/09	#K=3	
05	LN	074	VY LOW	(012)	UNSETTLED-ACTIVE	09/15	#K=3	
06	LN	073	VY LOW	(010)	UNSETTLED	14/16	#K=3	
07	BN-DIS	074	VY LOW	(012)	M.S.Lvls-ACTIVE	25/40	#K=3	M.S. Began@07/000
08	BN	075	VY LOW	(013)	M.S.Lvls-ACTIVE	22/25	#K=2	M.S. Over@08/1330
09	LN	074	VY LOW	(012)	ACTIVE-UNSETTLED	15/20	#K=2	Appr
10	LN-DIS	074	VY LOW	(011)	UNSET-ACTIVE-M.S. Lvls@High Latitudes	25/30	#K=3	Periods of M.S.
11	LN-BN	075	VY LOW	(012)	ACTIVE-M.S.Lvls	15/20	#K=3	M.S.Lvls in Higher
12	BN-DIS	074	VY LOW	(012)	ACTIVE-M.S.Lvls	22/32	#K=3	* Lat.
13	LN-BN	075	VY LOW	(013)	ACTIVE-UNSETTLED	18/20	#K=2	
14	LN	074	VY LOW	(012)	ACTIVE-UNSETTLED	12/15	#K=2	
15	LN	077	VY LOW	(015)	UNSETTLED	10/13	#K=3	
16	BN	077	VY LOW	(015)	UNSETTLED-M.S.Lvls	20/22	#K=3	
17	HN	077	VY LOW	(015)	UNSETTLED-QUIET	06/06	#K=3	
18	BN	077	VY LOW	(015)	ACT-M.S.Lvls	20/41	#K=4	MAJ STORM BEGAN@
19	BN-DIS	075	VY LOW	(013)	MAJOR STORM IN PRO	54/67	#K=4	18/1800 UTC "
20	DIS	074	VY LOW	(012)	" " Continues	34/58	#K=4	AURORA @LORING,MA
21	DIS-BN	074	VY LOW	(001)	ACT-MINOR STORM	28/43	#K=4	PERIODS OF STORMY
22	DIS	074	VY LOW	(001)	ACTIVE- M.S. Lvls	35/46	#K=4	Storminess Reporte
23	BN-DIS	073	VY LOW	(001)	ACTIVE	15/29	#K=4	
24	DIS	072	VY LOW	(001)	ACTIVE-M.S. Lvls	*31/39	#K=4	
25	LN	071	VY LOW	(001)	Periods M.S.Lvls	13/16*	#K=3	
26	LN	070	VY LOW	(001)	UNSETTLED-ACTIVE	12/13*	#K=2	
27	LN	070	VY LOW	(001)	QUIET	09/10	#K=3	Perhaps Best HF th
28	LN	070	VY LOW	(001)	QUIET	09/10	#K=2	Month " " " "
29	LN	069	VY LOW	(001)	QUIET-UNSETTLED	08/09	#K=2	" " " " ."
30	LN-HN	073	VY LOW	(002)	QUIET	07/08	#K=1	Periods of K=1's0s
31	HN-LN	071	VY LOW	(002)	QUIET	05/--	#K=2	" ". " " "
NOVEMBER 1984								
01	BN-DIS	071	VY LOW	(001)	UNSETTLED-M.S.Lvl	23/28	#K=3	M.S.@01/0700-1500U
02	BN-LN	070	VY LOW	(001)	M.S.-ACTIVE	14/14	#K=3	
03	LN-BN	073	VY LOW	(001)	UNSETTLED-ACT-M.S.	17/19	#K=5	M.S.@03/1500-1800U
04	BN-LN	073	VY LOW	(001)	UNSETTLED-ACTIVE	15/20	#K=4	
05	LN	073	VY LOW	(001)	UNSETTLED-ACTIVE	13/15*	#K=3	
06	LN	072	VY LOW	(001)	UNSETTLED SLIGHTLY	11/16*	#K=3	
07	LN	072	VY LOW	(001)	UNSETTLED-ACTIVE	13/18*	#K=4*	
08	LN	072	VY LOW	(001)	ACTIVE	18/21	#K=2	
09	LN	074	VY LOW	(007)	ACTIVE-UNSETTLED	11/11	#K=3	small
10	LN	077	MODERATE		(013)	UNSETTLED-ACTIVE	13/17	#K=2	Occational/Flares
11	LN-BN	075	VY LOW	(012)	UNSETTLED-ACTIVE	15/17	#K=3	Addtnl sunspots on-
12	LN-HN	074	LOW	(011)	UNSETTLED-ACTIVE	10/09	#K=3	disk
13	LN	073	LOW-MOD	(010)	UNSETTLED-ACTIVE	10/07	#K=3	
14	LN-BN	074	VY LOW	(011)	UNSETTLED-ACTIVE	16/14	#K=2	
15	BN-DIS	075	VY LOW	(013)	ACTIVE-STORMY	26/51	#K=4	MAJOR STORM BEGAN@
16	DIS	072	VY LOW	(009)	MAJOR STORM AURORA RPTD, N.AMERICA & N. PACIFIC	75/112	#K=5	15/2230 UTC
17	DIS-BN	073	VY LOW	(010)	MAJOR-MINOR STM	33/80	#K=4	MINOR STM ENDED @
18	LN	073	VY LOW	(010)	ACTIVE-UNSETTLED	16/16	#K=2	17/???? UTC
19	LN	074	VY LOW	(011)	UNSETTLED-ACTIVE	16/17	#K=2	
20	LN-BN	077	VY LOW	(013)	ACTIVE-M.S. Lvls	18/--	#K=3	M.S.Lvls in N.Lati after Midnite LocalT
21	LN	080	VY LOW	(20)	ACTIVE	14/21	#K=3	
22	LN	080	VY LOW	(20)	ACTIVE	14/15	#K=3	
23	HN	081	VY LOW	(20)	ACTIVE	10/03	#K=3	
24	HN	083	VY LOW	(23)	UNSETTLED	09/09	#K=3	
25	HN	085	VY LOW	(26)	UNSETTLED	07/08	#K=3	
26	HN	085	VY LOW	(26)	UNSETTLED	08/07	#K=2	
27	HN	086	VY LOW	(27)	UNSETTLED	05/03	#K=2	C2 FLARE @1505Z
28	HN	083	MODERATE	(23)	UNSETTL-QUIET	08/08	#K=2	
29	LN	079	VY LOW	(18)	UNSETTLED	14/15	#K=3	
30	BN	079	VY LOW	(18)	UNSETTLED-ACT-STOR	16/30	#K=3	0405 SID 0300-0900MINOR STORM LVL

The SUNSPOT INDEX DATA CENTRE/ OBSERVATOIRE ROYAL DE BELGIQUE, BRUXELLES, BELGIUM reports the Mean Provisional International Sunspot Number (SSN) for September 1984 = 15.4, August = 24.8, July = 84, July = 37, June = 46.2, May = 75.1, April = 68.6, March = 83.6, and February = 84.5.

The Predicted Smoothed Monthly SSNs are: October-35, November-33, December -30, January 1985-28, February-26, and March-24.

The long path openings on 15 m experienced last year failed to materialize this year.

Taurids meteor showers were between Oct. 30 and Nov. 10 (1900 to 0630 local time) with Leonids meteor showers following 14-19th Nov. (0000-1230 local time, Northern Hemisphere).

THE SOLAR INDEX DATA CENTRE (SIDC) reports the average (mean) 10.7 cm Solar Flux for February 1984 = 140.6, March = 122.0, April = 128.7, May = 128.3, June = 100.3, July = 89.3, August = 83.7, September = 78.1, and October = 73.65.

Solar activity has been running very low and is expected to continue very low. Thus there are more than normal/seasonal MUFs and solar outputs. For the period of Oct. 22 through Nov. 7 there were very few sunspots and low solar flux readings.

One should not look at the data from Nov. 10 and conclude that some reorganization is taking place on the disk. The small bump in the solar flux indices (9-12th) cannot be taken as a prediction of reorganization. Nor should one conclude that we are at the bottom of this solar cycle (21), due to the fact that the last several rotations of the sun have produced a plateau of solar flux output with very little variation. The one thing to conclude is, not to conclude at this time...

The latest figures from SIDC/Observatoire de Belgique for the Mean Provisional International Sunspot Number (Mean) are: May 1984 = 75.1, June = 46.2, July = 37.0, August = 24.8, and September = 15.4. Prediction for SIDC Adjusted Method SSN: Nov. 1984 = 33, December = 31, January 1985 = 28, February = 26, March = 24, and April = 22.

ASTRONOMICAL PHENOMENA/ DATA FOR DECEMBER 1984

Date/Time Z	Event
02/1500	Moon at Apogee
08/1053	Full Moon
13/several hours before Sunrise	Geminid Meteor Shower (peak), the richest meteor shower this year
15/1525	Moon’s Last Quarter
18/1000	Moon at Parigee
21/1623	Winters Solstice
24th	Planet Mercury now appears in the morning sky, the best morning apparition of the year.
25th	Christmas Day - Celebrates the Moon passing 3.0 degrees south of Planet Venus at approx. 9 p.m. local time. Look for The Christmas Crescent and STAR shining down from the southwestern sky shortly after local sunset.
30/0527	Moon’s First Quarter
30/1200	Moon at Apogee
31/2400	End of this year.(Orwell, we made it! Ed.)

May I take this time-out to express my warmest HOLIDAY WISHES to you and your loved ones from our Family - A WARM HAWAIIAN ALOHA. This HOLIDAY WISH is for PEACE and GOOD WILL WORLD WIDE, TO YOU AND YOUR FAMILIES.

ALOHA, MELE KALIKIMAKA en HAOLE MAKAHIKI HOU - KH6BZF

PROPAGATION

Propagation prediction is a very tricky business. As Lee, KH6BZF, mentioned in one of his reports: "...from W. Roger Davis’s Public Relations Rules ... PR people are always the last to know... and the last to admit it!!! (Gee, PR could stand for Propagation Reporter... it fits!!!)". It is as "easy" as predicting weather one or two months ahead. There is a common denominator for both - the Sun, with it’s mischievous behavior. Even N4XX and W3ASK, when they published their first edition of the Propagation Handbook and tried to predict the next (just passing) sunspot cycle, were just about 180 degrees off! They predicted one of the worst or lowest cycles to come. What happened? We had one of the best or most record producing cycles since Marconi.

It is truly hard to predict what will happen 30 days from now, or sometimes even a few days ahead. Any successful contester and DXer planning a serious contest effort or a DXpedition better be familiar with what is happening "up there." Armed with "historical data" and having a basic knowledge of propagation mechanics, one can do much better than relying on some predictions made in magazines 60 or 90 days ago.

The reason why we publish the "historical data" is to help you in making your own predictions of propagation conditions. Having this information and charts, following the WWV transmissions and using some common sense, one is capable of making fairly accurate predictions for that upcoming contest weekend or DXpedition. We have seen expeditions go out there just to find that bands were in bad shape and they fell short of their expectations.

We just came out of the CQ WW DX CW Contest fire and it looks like the winning band in this contest was 40 meters. Judging by the claimed scores and breakdown of N2AA, the 40 m band was the best scoring band. Not that 40 is a bad band; quite often there is a lack of activity on CW to make it a good all-around band. Now that higher bands - 20 m and up, are practically dead during the darkness hours, most of the night owls switch to 40 m and below. With more and better antennas going up, at times it sounds like 20 m is used too. Especially around the sunset and sunrise times, the band is really boiling with juicy stuff.

A few interesting things were noticed on 40 m during the contest. UP3BA/UF was coming through around local noon and just about all afternoon. But you could not get back at him. It was a sort of one-way propagation. This is also noticeable on European signals in the early afternoon. They are quite often S9 on the east coast. Switching between the high and low antennas usually produces a very small diference in signal strength. But it’s not always like that. In February, 1984 there were good openings from the east coast to deep Asia. Around 1 p.m. local time a bunch of stations from Sri Lanka, India and even VU7ANI from the Andaman islands were worked. So don’t give up.

In forthcoming issues we will write more about some of the things concerning propagation. We would like to hear about some unusual contacts. (E.g. VE3CVX worked VU2 in the 1983 ARRL 10 m contest two days in a row around 1 p.m., when there were hardly any Europeans workable. (VE3BMV)

THE TRUTH ABOUT THE "TRUTH ABOUT SWR"

YURI BLANAROVICH, VE3BMV

A lot has been written about this subject. Some say it is important to keep SWR low. Some say it isn't. This argument can have a "scientific" side to it or a practical one.

During the 1984 Dayton Hamvention, W2DU had a presentation on this subject. The blank statement that comes out of this presentation and other articles published on the subject goes something like this: "SWR is not important, the losses you get are mostly from the attenuation in the coaxial cable. So don't worry about it. Back in the old days we did know about it and worked the world!" When I asked W2DU some questions and tried to bring the point up, I am afraid the question was not even understood nor was its significance appreciated. Then, at the YCCC hospitality suite, there was a conversation going on about this subject. W2YV, I and another "more theoretical" type from the N2AA crew were discussing the subject. Finally, W2YV and I agreed on the conclusion; our friend ended up surprised, because it wasn't exactly as books would say. Fortunately we are dealing with something that is not imaginary and can be measured and you can see it yourself.

Also, Kurt Sterba in "Aerials," in Worldradio discusses the subject, and I think he is a bit off, too.

I think the problem stems from some assumptions and then is generalized The result, if applied as a blanket statement, can lead to wrong conclusions and results. If we look at a simple dipole and open wire feedline, that has constant impedance, they are right or close to the truth. But if we look at a little bit more complicated situation, then the error can be quite significant. Let's look at some points.

The experts always look at that dipole and feedline fed by the transmitter and the whole matching problem boils down to matching or transforming the combination of antenna plus feedline impedance to the output of the transmitter impedance (or better finals in them). In this case I would agree; the losses are from dissipation in the cable. The higher the frequency, the higher the losses. The transmitter has almost no problem to cope with that.

But besides this we have a higher RF voltage on the coax line, connectors, relays, tuning circuits, and coupling and bypass capacitors in the amplifier. It is not imaginary voltage, it is real. Do I need that? No way. My contest amplifier has to run reliably and I don't want to see higher voltages in it; it's bad enough as it is. This might not be important with 100 W power levels, but becomes a headache with with 2 kW amplifiers. Most of them are designed to take more or less 50 Ohm impedances and funny things happen when SWR goes over 3:1. You do not get optimum matching, and on higher bands, relays, etc., can arc over.

Now this is on transmit. What about the receive situation? That antenna extracts the signal from the air (medium) and becomes the source of electrical RF current and voltage in the antenna. That antenna is the source, it has it's own characteristic impedance. Now is it the same situation as we had on transmit? If we have a transmission line that is 50 Ohms, and our antenna is a folded dipole with 280 Ohm impedance, what good does it do to the receiver when we switch that feedline from the matched transmitter to the receiver that is usually "fixed" impedance. This situation exists, e.g., in the Kenwood TS930S Transceiver equipped with an automatic antenna tuner. That tuner is only used on transmit, not on receive!!!

The question is, how good is the transfer of power between the antenna on receive and the mismatched feed line? Wouldn't we get reflections at that point? Where does the "reflected" power go? Is it reradiated back? Have you ever used a microphone with 200 Ohm impedance on a 50 kOhm audio amplifier or transceiver? How does it sound, how much signal are you getting from it? I prefer to match them right there, where the mismatch is. The blanket statement is: things are the same on transmit and receive! Are they really?

The question we were discussing that Hamvention morning was: if you have "50 Ohm transmitter," then you have "cheap" 75 Ohm hardline going out the shack, then you have 50 Ohm flexible coax, then you have a 30 Ohm antenna. Do you have to put matching circuits at every junction, or is it "transformed" all along the line and you just match it at the transmitter end? Our educated friend was more inclined to support just that. The old contest tigers prefered to have them matched at each junction. Who is right? Well, you can find out for yourself. I did, when I quickly set up the mock-up with pieces of coax, tuners and SWR bridges. I found that after the second junction I lost about 16 Watts from 80 Watts going in with SWR about 4:1 using a short length of coax. We will have more on that later.

More problems come to play if we are

using an antenna better than the dipole. We have seen antennas (3 el. Yagi) that resonate .5 MHz below the band. Gamma match will match it no problem. But some people tend not to worry about any matching up on the tower. They do it with the tuner in the shack, because it's O.K. by the book. The result is that a guy like this in real life situation is about 20 dB down from your signal and he blames you running the outrageous power. The truth is, his antenna is slightly better than his dipole (it has some front to back), his coax was from Radio Shack of the CB variety (70% shield and cheap dielectric), the gamma match at the antenna is off, and he looses a dB or so in the tuner. When you add all this up, it shows on your signal going out and coming in.

Antenna tuners and baluns have losses too. I checked my TS930S tuner (actually two of them, as I was suspicious that maybe I had a lemon) and with 120 Watts going out into a 50 Ohm dummy load without the tuner, I would lose about 15 Watts in the tuner when I turned the tuner on and "matched" the dummy. The same goes for ferrite baluns (I hate them); you loose about .9 dB or so. Here we go trying to get an extra dB from the antenna by putting another director on it, and then we generously lose it in all those magnificent devices that everybody is trying to sell us. Isn't that ridiculous, when we spend all the bucks on those gadgets, rather than "spending" an hour or so trying to tune and match the antenna to the feedline and have it perfect, no losses and good on receive and transmit? No additional high voltages floating around the shack. Can you imagine those tiny microvolts coming from your antenna and "looking" into all that mess that follows from the antenna terminals down to the shack? We do not have the adjustable source of power to push through and not to worry about losing 30% or so. I, as a contester want to get every .5 dB I can get, because that means another layer of weak JAs or GMs with 10 Watts and indoor dipoles, and that means a lot of contest points!

Once we were doing the "regular" signal checks with bunch of us from the Toronto area. VE3KZ, who is a king of the hill, above all of us, with a super location, kept getting about 10 dB lower reports than others. SWR actually didn't look too bad. He brought the Time Domain Reflectometer and looked at the coax. To his horror he found that about the first 30 feet of his heliax (of about 200 ft. length) was like a bumpy road. Impedances were all over from 20 Ohms to 100. After he replaced that piece of the line he was back in line with others. Sounds unreal? It was real! It also meant that much of the power was not getting past that "bumpy road," and it didn't matter how you matched it!

Learning from experiences like that, I prefer to have my antennas tuned to the frequency I want them to operate on, and make sure they actually are tuned there. Then I try to avoid the matching devices between the antenna and the feedline. I will either design the antenna to have characteristic impedance equal to feedline impedance or use the matching device (Beta match, etc.) to match the antenna right there where the mismatch is. It doesn't cost anything, just takes a bit more time to get it right and adjusted. No baluns are used here, especially those ferrite ones. (Ever loaded the wrong band into a "baluned" antenna? That fried ferrite stinks for weeks!)

The old contest tigers match the things right there where the mismatch is and leave the "transformation matching" to the guys in the white coats. Antenna tuners and baluns are for those who paid to get some gain and then they pay to lose it. Check your cables and connectors from time to time, they can get sick too. If you follow this advice, you will probably spend a lot less time in the pile-ups and get bigger scores in the contests!

(VE3BMV)

The three element 40 m Yagi is ready to go up atop of VE3BMV's 110 ft. rotatable pole - the Big Bertha. This "clumsy" antenna doesn't fit within the property limits regardless how you turn it. The lot is 46 by 120 ft., while the antenna has full size 60 ft. elements on a 54 ft. boom. This is possible only because of a very understanding neighbor on one side and a public park on other two sides.

CONTEST RULES

FRANK ANZALONE, W1WY

Canada Contest

0000Z to 2400Z Sun., Dec. 30

Again sponsored by the Canadian Amateur Radio Federation, this contest follows the same pattern as the Canada Day Contest last July.

Activity will be on all bands, 2 through 160 meters, phone and c.w. Single operator, single and all band, multi-operator all band only.

The same station may be worked on each band and each mode for QSO and multiplier credit.

Exchange: RS(T) and QSO number starting with 001, and province.

Scoring: 10 points for each contact with Canada, 4 points if with others, and 20 bonus points for each contact with any CARF official news station using the suffix TCA or VCA.

Multiplier: Number of VE provinces/territories worked on each band and mode (12 prov./terr.) Contacts with stations outside of Canada count for QSO points no multiplier.

Frequencies: 1810, 1840, 3525, 3770, 7025, 7070, 14025, 14150, 21025, 21250, 28025, 28500, 50040, 50110, 144090, 146520.

Awards: Certificates to the top-scoring entries in each class, in each VE prov./terr., U.S. call area, and DX country. Trophies to single operator, all band, and multi-operator winners.

Include a summary sheet with your log showing the scoring, etc., and a dupe sheet. Official log forms are available.

Mailing deadline is January 31st to: CARF Contest, c/o N. Waltho, VE6VW, General Delivery, Morinville, AB, T0G 1P0 Canada.

"73" 40 & 75 S.S.B. Contest

40 M.: 0000Z to 2400Z Sat. Jan. 12
75 M.: 0000Z to 2400Z Sun., Jan. 13

This is the fourth time around for both these contests sponsored by *73 Magazine*. Each band is treated as a separate contest and requires separate entries.

There are two classes: single operator and multi-operator single transmitter. Single operator stations are limited to 16 hours of operation. Multi-operator stations can operate the full 24 hours. Off periods must be no less than 30 minutes each and indicated on your log and summary sheet.

Exchange: RS and QTH. State, province, or territory for U.S. and Canada; country for DX (including KH6 and KL7).

Points: Five points per contact made within the continental U.S. and Canada; 10 points for all others.

Multiplier: One for each U.S. state (48), each Canadian prov./terr. (13), and each DX country worked.

Final Score: Total QSO points times the total multiplier points.

Awards: Awards will be issued to the winners in each class, in each U.S. state, each Canadian prov./terr., and each DX country. (A minimum of 100 QSO's is required to be eligible.)

Duplicate contacts in excess of 2% of the final score and other infractions will be considered grounds for disqualification. Include a dupe and summary sheet and the usual signed declaration. Entry and log forms are available by sending a large s.a.s.e. to the addresses below.

Mailing deadline for all entries is February 12th. Forty meters go to: Dennis Younker, NE6I, 43261 Sixth Street East, Lancaster, CA 93535. Seventy-five meters go to: Jose A. Castillo, N4BAA, 1832 Highland Drive, Amelia Island, FL 32034.

"73" 160 Meter S.S.B. Contest

0000Z Sat. to 2400Z Sun., Jan. 19–20

This is the sixth annual 160 Meter S.S.B. Contest sponsored by *73 Magazine*. There are two classes: single operator and multi-operator single transmitter. Single operator stations are limited to 32 hours of operating time; multi-operators may operate the full 48-hour contest period.

Exchange: RS and QTH. State for the U.S., province/territory for Canada, and country for DX stations.

Points: Five points for contacts between W/VE stations; 10 points for all other contacts.

Multiplier: One for each U.S. state (48), Canadian prov./terr. (13), and each DX country worked.

Final Score: Total QSO points times the sum of the multiplier points.

Awards: Will be issued in both classes in each U.S. state, Canadian prov./terr., and DX country. A minimum of 100 QSOs must be worked to be eligible.

U.S. and Canadian stations are expected to observe and not transmit in the DX Window, the 5 kHz segment between 1825–1830 kHz.

Disqualification may result for irregularities in logging, failing to omit duplicate contacts, and other infractions resulting in a score reduction of more than 2%.

Include a summary sheet, multiplier check list, and a QSO dupe sheet for logs with 100 or more contacts. Log forms are available by sending a large s.a.s.e. to the address below. Mailing deadline for entries is February 20th. This year they go to: Harry Arsenault, K1PLR, 603 Powell Avenue, Erie, PA 16505.

Texas QSO Party

0000Z Sat. to 1800Z Sun., Jan. 19–20

This one is again organized by the West Texas ARC. The same station can be worked on each band and each mode, and mobiles in each county change. Single operator only.

Exchange: QSO no., and QTH. County for Texas stations. State, province, or country for others.

Scoring: Texas stations score 1 point per QSO on phone, 2 points if on c.w., fixed or mobile. (In-state contacts permitted for QSO and multiplier credit.) Non-Texans same as above. However, Texan phone mobiles are worth 5 points, c.w. mobiles 7 points.

Multiplier: Texans use states, VE provinces, DX countries, and Texas counties. Non-Texans use Texas counties (maximum of 254).

Frequencies: C.W.—3565, 7065, 14065, 21065, 28065. Phone—3940, 7260, 14280, 21370, 28600. Novice—3710, 7110, 21110, 28110.

Awards: Certificates to the top scorers in each state, VE province, and DX country, and top 10 Texas stations. There are also plaques for the overall winners in seven different areas: U.S., U.S. Novice, DX, VE, Texas fixed, mobile, and Novice stations.

All logs must be received by March 15th. This year they go to: Tom Horton, K5IID, 2708 Halifax Avenue, Odessa, TX 79762.

AGCW-DL QRP Contest

1500Z Sat. to 1500Z Sun., Jan. 19–20

This is the winter edition of this QRP Contest organized by the AGCW-DL. It's a c.w. only contest, all bands 10 to 160 meters. The same station may be worked on each band for QSO and multiplier credit.

There are five classes as follows:

A. Single Opr.— 3.5 watts or less.
B. Single Opr.—10 watts or less.
C. Multi-Opr.—10 watts or less.
D. QRO stations, over 10 watts.
E. S.w.l.'s

Multi-operator stations may operate the full 24 hours. All other classes must take a 9-hour break.

Exchange: RST, QSO no., and power input. Add X if transmitter is crystal controlled (550001/5X). QRO stations add QRO (579002/QRO).

Points: QSO with own country, 1 point. Other countries own continent, 2 points. DX outside own continent, 3 points. Crystal-controlled stations are limited to 3 crystals for each band, and take double above points for QSOs.

Multiplier: One for each country and one for each DX contact. For scoring purposes call areas in JA, PY, VE, VK, W/K, ZS are counted as multipliers.

Final Score: Total QSO points times the multiplier on that band. Add the sum of scores from each band.

Awards: Certificates to the first three places in each class on each band.

Use a separate log for each band. All entries must be received by the contest manager no later than 6 weeks after the end of the contest. They go to: Siegfried Hart, DK9FN, Spessartstrasse 80, D-6453 Seligenstadt, Fed. Republic of Germany (include one IRC for results).

A5 ATV WAS SSTV Contest

0000Z Mon. to 2400Z Sun., Jan 21–27

This year the 4th annual SSTV Contest sponsored by *A5 ATV Magazine* is a week-long affair. The objective is to contact U.S. states on video mode only. All contacts must be in video form with a minimum of callsign and RSV signal report, sent and received.

Each SSTV contact is worth 10 points regardless of location. Each new state worked is worth 100 points, and you pick up 500 points if you contact Alaska or Hawaii. Total points is your final score.

Advanced and Extras will be found on 3845, 7171, 14230, 21340, 28680; Generals on 3990, 7290, 21440, and 28680.

The top scorer gets a three-year subscription to *A5 ATV Magazine;* district leaders, a one-year subscription. All entrants will receive a special "gold" certificate. Logs go to Contest Mgr. Mike Stone, WB0QCD, *A5 ATV Magazine*, P.O. Box H, Lowden, IA 52255.

French DX Contest

CW: Jan. 26–27 SSB: Feb. 23–24
0600Z Saturday to 1800Z Sunday

This year's announcement from the REF showed several changes from last year's format. It's still the world working the French Europeans as well as other French countries, departments and territories all over the world, but independent countries were not listed this year. The French areas can usually be identified by the letter "F" in the prefix of their call.

Classes: Single operator and multi-operator. Multi-operator stations must remain on the same band at least 15 minutes. There is no time limit for single operator stations this year.

Exchange: RS(T) plus a three-figure QSO number starting with 001. French stations will also include two figures or letters identifying their department.

Points: One point per contact between stations in the same continent, 3 points if with other continents.

Multiplier: Each French European department (95) and each overseas department and territory worked, as well as French Army in West Germany, DA1 and DA2, Corsica 2A and 2B, and the Official Club Station, F6REF.

Final Score: Total QSO points from all five bands, 3.5–28 MHz times the sum of the multiplier from each band.

Awards: Certificates to the top scorers in each country. European single operators must make at least 100 QSOs; multi-operators 250 QSOs. All other areas 50 QSOs for single operator, 100 QSOs for multi-operators.

Stations making over 250 contacts must include a dupe check list with their logs. The usual disqualification rules for excessive duplicate contacts and other violations will be strictly enforced.

All entries must be received by March 1st for CW, and April 1st for SSB by the REF Contest Committee, 2, Square Trudaine, 75 009 Paris, France.

"73" 15 & 20M SSB Contest

15M: 0000Z to 2400Z Sat., Jan. 26
20M: 0000Z to 2400Z Sun., Jan. 27

This is the first time for both these contests sponsored by *73 Magazine*. Each band is treated as a separate contest and requires separate entries.

There are two classes, single operator and multi-operator single transmitter. Single operator stations are limited to 16 hours of operation. Multi-operator stations can operate the full 24 hours. Off periods must be no less than 30 minutes each and indicated on your log and summary sheet.

Exchange: RS and QTH. State, province, or territory for U.S. and Canada; country for DX (including KH6 and KL7).

Points: Five points per QSO within own continent. Ten points per QSO for contacts outside own continent.

Multiplier: One for each U.S. state (48), each Canadian prov./terr. (13), and each DX country worked.

Final Score: Total QSO points times the total multiplier points.

Awards: Awards will be issued to the winners in each U.S. state, each Canadian prov./terr., and each DX country in both classes. (A minimum of 100 QSOs to be eligible.)

Duplicate contacts in excess of 2% of the final score and other infractions will be considered grounds for disqualification. Include a dupe and summary sheet and the usual signed declaration.

Entry and log forms are available by sending a large s.a.s.e. to address below.

Mailing deadline is one month from end of each contest, and they go to: Chuck Ingram, WA6R, 44720 North 11th St. East, Lancaster, CA 93535.

Classic Radio Exchange

2100Z Sun. to 0400Z Mon., Jan. 27–28

This is the winter edition of this unusual event. The format is the same as it has been for the past several years. The object is to restore and operate older equipment with other like-minded hams, not required in the exchange, but a distinct advantage in the scoring. A classic radio is any equipment built since 1945 but at least 10 years old *(25 years would be more in line—ed.).*

The same station may be worked on each band and each mode, and with different equipment combinations.

Exchange: Name, RS(T), QTH, receiver and transmitter type, and other interesting conversation.

Scoring: Multiply total QSOs from all bands and all equipment combinations used by the number of different receivers, transmitters, states, provinces, and DX countries worked on each band and each mode. Multiply that total by your classic multiplier: total years old of all receivers and transmitters used. Three two if gear is a transceiver.

Frequencies: C.W.—60 kHz up from low edge of each band. Phone—3910, 7280, 14280, 21380, 28580. Novice—3720, 7120, 21120, 28120.

Send logs, comments, anecdotes, etc., to: Stu Stephens, K8SJ, 1407 Hollyrood Road, Sandusky, OH 44870. Include an s.a.s.e. for a copy of the newsletter with the results. *(Now if Stu would cut down the scoring requirements and include some kind of an award, he might lure some fellows from other activities—ed.)*

ZERO District QSO Party

1900Z Sat. to 0100Z Sun., Feb. 2–3
1500Z to 2400Z Sun., Feb. 3

This year's party is again being sponsored by the Davenport RAC. Stations outside the ZERO District will be working ZERO's only; ZERO's may contact anyone. The same station may be worked on each of the 5 bands, 10 through 80 meters, and on each mode. Mobiles in each county change.

Exchange: RS(T) and ARRL section. ZERO's will also include their county.

Scoring: Phone QSO's count 1 point; c.w. 2 points. ZERO's multiply total QSO points by the sum of ARRL sections, ZERO counties, and DX countries worked for their final score. All others use ZERO district counties for their multiplier.

Frequencies: C.W.—3560, 7060, 14060, 21060, 28060. Phone—3900, 7270, 14300, 21370, 28570. Novice—3725, 7125, 21125, 28125.

Awards: Certificates to the top scorer in each ARRL section, DX country, Novice/Tech., and Mobile. Plaques to the overall high scorer in ZERO land and outside the ZERO area.

Include a large s.a.s.e. for a copy of the results and a participation certificate. Mailing deadline is March 10th and logs go to: W0BXR, P.O. Box 10304, Davenport, IA 52803.

Vermont QSO Party

0001Z Sat. to 2400Z Sun., Feb. 2–3

This event is again being sponsored by the Central Vermont ARC. The same station may be worked three times per band—once each on phone, CW, and RTTY—for QSO points.

Exchange: RS(T) and QTH. County for VT: state, province, or DX country for others.

Scoring: One point per phone QSO; 5 points if on CW or RTTY. VT stations multiply total by (VT counties + states + VE provinces + DX countries) worked. All others use VT counties for their multiplier (maximum of 14). Work the club station W1BD and add 20 bonus points to your score.

Frequencies: Phone—3910, 7230, 14260, 14320, 21360, 28570, 50110, 144.2 (no repeaters). CW—3540, 3720, 7040, 7120, 14040, 21040, 21140, 28040. RTTY—3620 and 90 kHz from lower edge of other bands.

Awards: Certificates to the top-scoring station in each state, VE province, and DX country, and each Vermont station submitting a log. There is an annual plaque to the highest scoring Vermont station.

The W/VT Award is available to stations working 13 of the 14 Vermont counties.

Official log forms are available by sending a large s.a.s.e. to KK1U. Mailing deadline for all entries is March 1st to: D. Nevin, KK1U, W. Hill, Northfield, VT 05663. Include an s.a.s.e. for a copy of the results.

1984 PACC Contest Results

U.S.A.

*K1KI	9.288	KK3S	416
K1VUT	1,817	N3BNA	416
K1BV	1.330	*N4MM	1,638
W1WY	480	WX4A	1,470
K1GZM	132	K4FPF	1,100
N1CRD	66	N4NX	624
*K2SX	1.386	*KN6O	12
N2IT	1.040	*K8PYD	756
K2FE	484	W8CHV	722
WB2TKD	140	W8VSK	595
*W3ARK	2.340		

Canada

*VO1AW	3.663	VE3MRS	2.725
VO1PJ (QRP)	36	VE3FGL	1.974
*VE3JPP	3.036	*VE4MF	81

**An asterisk denotes certificate winner.*

The 1985 CQ World Wide 160 Meter DX Contest

C.W.: January 25–27
S.S.B.: February 22–24
Starts: 2200 GMT Fri.
Ends: 1600 GMT Sun.

This year's rules are the same as those used last year with the new scoring format adopted in 1983.

Tradition has established the DX window as an essential part of the 160 Meter C.W. Contest. Keeping the 1825–1830 kHz segment of the band free of U.S. and VE activity had made it possible to work the weaker DX stations who use the window for split-frequency operation. However, with the ever-increasing number of countries now allowing 160 meter operation, many of the new stations on the band use transceivers and cannot work split frequency. Working on frequency in the window is not only nonproductive, but it also disrupts the whole concept of the DX window. Therefore, it is recommended that on-frequency operation be confined to areas outside the 1825–1830 kHz portion of the band.

Classes: Both single operator and multi-operator (maximum of 5 operators per station).

Exchange: RS(T) and QTH. State for U.S. and province for Canada. Not necessary for DX to spell out their QTH, but it is recommended that only standard prefixes be used in their call.

Scoring: Contacts with stations within own country, 2 points. Contacts with stations in other countries but in the same continent, 5 points. Contacts with stations in other continents, 10 points. (KH6 and KL7 are considered countries.)

Multiplier: Each U.S. state, VE province, and DX country. (U.S. and Canada are not country multipliers.) There are three VE1 provinces: New Brunswick, Nova Scotia, and Prince Edward Is.

Final Score: Total QSO points times the sum of the multipliers (U.S. states + VE provinces + DX countries). Maritime mobile scoring will be determined by the location.

Penalties: Three additional contacts will be deleted from the score for each duplicate, false, or unverifiable contact removed from the log. A second multiplier will also be removed for each one lost by the above action.

The *CQ* Contest Committee is strongly considering disqualifying repeated offenders and stations that solicit on-frequency contacts in the window. The 1850–1860 kHz window has not been well established as yet, but the same procedure should be used for that sector of the band for s.s.b. operation.

Disqualification: Violation of the rules and regulations pertaining to amateur radio in the country of the contestant, violation of the rules of the contest, unsportsmanlike conduct, or taking credit for excessive duplicate contacts or multipliers will be deemed sufficient cause for disqualification.

Disqualified stations or operators may be barred from competing in future *CQ* contests for a period of up to three years.

Awards: Certificates to the top scorers in each class, in each U.S. state, VE province, and DX country.

Two Plaques: Europe—C.W. and S.S.B., donated by Don Busick, K5AAD. World and U.S.A. awards will be announced in the Contest Calendar column later if they are available.

The same plaques may be won once only by the same station within a two-year period. Winner of the World Plaque will not also be considered for a sub-area award. That award goes to the runner-up of that area.

Sample log and summary sheets may be obtained from *CQ* by sending a large s.a.s.e. with sufficient postage to cover your request. It is not necessary to use the official forms. You can make up your own, 40 contacts to the page, time in GMT, and columns for exchange sent and received, multiplier, and QSO points. Indicate the multiplier only the first time it is worked.

Include a summary sheet with your entry showing the scoring and other essential information, and a signed declaration that all rules and regulations have been observed. Mailing deadline for c.w. entries is February 28th, and March 31st for the s.s.b. section.

Logs can be sent directly to the 160 Contest Director, Don McClenon, N4IN, 3075 Florida Avenue, Melbourne, FL 32901 USA. They can also be sent to *CQ* 160 Meter Contest, 76 North Broadway, Hicksville, NY 11801 USA. *(Please indicate c.w. or s.s.b. on the envelope.)*

FCC NEWS

BILL GRENFELL, W4GF

UNAUTHORIZED INTERCEPTION AND USE OF SATELLITE TRANSMISSIONS

The Federal Communicaions Commission has been made aware that some licensees of domestic satellite earth station facilities may have received and distributed transmissions without authority from the sender.

The intent of this notice is to remind licensees of their affirmative obligation to assure that violations of law and abuses do not occur. Earth station licenses are conditioned on use of the facilities involved only for reception of such material as the permittee has been authorized to receive by its sender. Earth station operation is also subject to Section 605 of the Communications Act which makes it unlawful:

- for a person not authorized by the sender to intercept radio communications and divulge or publish the existance, contents, substance, purport, effect or meaning thereof to any person; or,
- for a person not entitled thereto to receive radio communications and use such communication or any part therof for his own benefit or for the benefit of another who is not entitled thereto.

Material submitted over domestic satellites is not "broadcast" material within the meaning of sections 605, and authorized for reception and use must be given by the sender. Moreover, Section 605 makes it unlawful for anyone to make use of unauthorized interceptions:

- No person having received any intercepted radio communication or having become acquainted with the contents, substance, effect or meaning of such communication (or any part thereof shall divulge or publish the...contents...or use such communication...for his own benefit or for the benefit of another not entitled thereto.

Therefore, broadcast stations or cable television systems and other persons will be in violation of the law if they divulge, publish or use unauthorized intercepted communications. (FCC's Public Notice #7999)

FCC HAS PROPOSED TO AUTHORIZE THE SPREAD SPECTRUM AND OTHER WIDEBAND EMISSIONS ON FREQUENCIES ABOVE 70 MHz "...UNDER CONDITIONS THAT PREVENT HARMFUL INTERFERENCE TO OTHER AUTHORIZED USERS OF THE SPECTRUM." Released May 21, 1984, the Commission's Further Notice of Inquiry and Notice of Proposed Rulemaking (GEN Docket No. 81-413) stated "We anticipate that this authorization will stimulate innovation in this technology, while meeting our statutory goal of controlling interference." The Notice explained that "Spread spectrum is a term applied to communications systems that spread radiofrequency energy over a wide bandwidth by means of an auxiliary spreading code." The several methods used are "...commonly referred to as: direct sequence (or pseudonoise), frequency hopping, time hopping, pulsed FM (or chirp) and hybrid systems." "The spreading or dilution of the energy in spread spectrum systems over a wide bandwidth results in several possible advantages: short range interference-free overlays on other emissions, resistance to interference from other emissions, and low detectability." The Commission's Notice is a 26-page document and I recommend it be read by everyone interested in the technique and the rules proposed for management of its use. FCC's mailing address is Washington, D.C. 20554. According to the W5YI Report (09/15/84 and 10/01/84) comments have been filed opposing spread spectrum by non-amateurs on amateur bands (above 70MHz), on the basis that FCC has greatly underestimated the potential for interference; that the interfering noise would be difficult to detect and locate and that the proposed rules appear to offer no legal or procedural recourse to the amateur radio operator.

SOME PETITIONS FOR RECONSIDERATION OF THE AMATEUR STATION POWER LIMIT AND MEASUREMENT RULE HAVE BEEN DENIED BY FCC. Effective in August 1983, station power was to be measured at the antenna terminal and to be limited to a maximum of 1500 watts peak envelope power. Users of amplitude modulated full carrier telephony are allowed to use the 1 kilowatt D.C. input to the final amplifier limit until August 29, 1990. The denial was essentially on the basis that the petitioners had not presented any information not already considered by the Commission in its original decision. (FCC Report and Order in PR Docket 82-62, effective 08/29/83).

THE QUESTIONS FOR THE AMATEUR RADIO OPERATOR LICENSE EXAMINATIONS MAY BE OBTAINED FORM THE FCC FIELD DISTRICT OFFICES AS FOLLOWS: Study Guide, PR Bulletin 1035; Novice Class 1035A; General/Technician Class 1035B; Advanced Class 1035C; and Extra Class 1035D. Bulletin 1035 contains a list of the general subjects covered by each examination element. Bulletins 1035A thru 1035D list pools of questions from which each individual examination is composed.

A PETITION TO ELIMINATE ALL SUBBANDS IN THE AMATEUR BANDS WAS DENIED BY FCC LAST SEPTEMBER. Among the considerations for the denial was that the petitioner, Gary Mitchell, KH8AC, had recently requested that a CW-only subband be created in the 160 meter band!

SHOULD FCC AUTHORIZE U.S. BROADCAST STATIONS ON GUAM AND SAIPAN, WHICH ARE IN WORLD FREQUENCY ALLOCATION REGION 3, TO OPERATE IN THE 7100-7300 kHz BAND, WHICH IS ALLOCATED EXCLUSIVELY TO THE AMATEUR RADIO SERVICE IN WORLD ALLOCATION REGION 2? FCC proposes it. ARRL objects to it! Current FCC High Frequency Broadcast station rules do not provide the 7100-7300 kHz band for assignment to its HF broadcast station licensees. FCC Mass Media Bureaus Docket No. 84-706 Notice of Proposed Rule Making (NPRM) would add that band to the others listed in rule Section 73.702(f), available, however, only to U.S. stations located in Region 3. This is in consideration of a petition, RM-2959, filed by Trans World Radio Pacific, FCC licensee of International Broadcast Station KTWR, Agana, Guam. While admitting such use is clearly permitted by the International Radio Regulations, ARRL contends it "...would be inconsistent with overall U.S. policy concerning 7MHz." In addition to the alleged increased flexibility to FCC licensees in Region 3, the petitioner alleges their use of a 7 MHz frequency will also ease congestion on the other frequency bands shared with international broadcast stations in the Continental U.S.

A FORMER FCC AMATEUR LICENSEE WHOSE LICENSES WERE REVOKED AND SUSPENDED CAN NOT OPERATE AS A THIRD PARTY IN THE PRESENCE OF A LICENSED OPERATOR. "The presence or absence of a licensed operator makes no difference." "You...were formerly a licensed Amateur who forfeited the right to operate an Amateur station. Therefore you are not in the class of persons intended to be exposed to Amateur radio by virtue of Section 97.79(d). (It permits third party communications.) "We remind you that, at such time as you file an application for a new station license, your actions during the period that you were under suspension and revocation will be taken into consideration." "A course of action which is essentially a sham and subterfuge to evade the effect of the Summary Decision against you would reflect adversely on any future Amateur application you may file." The foregoing was extracted from FCC Special Services Chief Raymond Kowalski's letter in response to a September 11, 1984 letter of inquiry from Calvin Plageman, ex-WD6DSV. Plageman's licenses were revoked and suspended, effective September 19, 1984 for willful and malicious interference to the operation of other Amateur stations. See last month's FCC NEWS for other details.

2310-2390 MHz OF THE 2300-2450 MHz BAND, WHICH IS AVAILABLE TO THE AMATEUR RADIO SERVICE ON A SECONDARY BASIS, WAS ASSIGNED TO THE AVIATION SERVICE FOR FLIGHT TEST TELEMETRY STATIONS, when FCC adopted Report and Order in General Docket No. 84-186, on September 26, 1984. ARRL reports: "Part 97 has not yet been affected. However, this action is one of several in a string of procedural assaults on continued Amateur Radio occupancy of 2310-2390 MHz. Radio amateurs presently enjoy secondary status over the entire 2300-2450 MHz band. ARRL continues to oppose elimination of amateurs' status in this segment. The Southern California Repeater and Remote

Base Association (SCRRBA) also opposed these actions."

THE COMMENT DEADLINE ON FCC'S PR DOCKET 84-874 NOTICE PROPOSING TO ALLOCATE THE 1900-2000 kHz BAND TO RADIOLOCATION AS A PRIMARY SERVICE, HAS BEEN EXTENDED TO JANUARY 24, 1985, and to March 11 for reply comments. "... General Docket 80-739 states that the purpose of allocating the 1900-2000 kHz band to the Radiolocation Service was to provide reaccommodation spectrum for radiolocation users that will have to move out of the 1605-1705 kHz band when AM broadcasting is implemented in that band." The only reference to the fate of the Amateur Radio Service in the Commission's nine page Notice of Proposed Rule Making (NPRM) is a quote of the US 290 footnote to the U.S. Table of Frequency Allocations as amended as a result of the 1979 World Administrative Radio Conference (WARC '79). It reads: "In the band 1900-2000 kHz, amateur stations may continue to operate on a secondary basis to the radiolocation service, and in accordance with NG15 pending a decision as to their disposition through a future rule making proceeding in conjunction with the implementation of the standard broadcasting service in the 1625-1705 kHz band." (The NG15 provision for Loran sharing has been cancelled). Those wishing to file comments should mention PR Docket 84-874, send them the Secretary, FCC, Washington, D.C. 200554, and include an original and five copies. However, one copy may be submitted for informal consideration. "All comments are given the same consideration, regardless of the number of copies submitted." (See previous FCC NEWS for more background on this rule making).

THE LEGISLATION TO MAKE WILLFUL OR MALICIOUS INTERFERENCE A STATUTORY OFFENSE, WHICH WAS INTRODUCED BY CONGRESSMAN BATES AND SENATOR GOLDWATER IN THE LAST SESSION OF CONGRESS, "DIED" WITHOUT ACTION". HOWEVER, it is likely that they will re-introduce appropriate bills in the next session. (See previous FCC NEWS for a quote of Senator Goldwater's S.2975 BILL.)

THE ENTIRE 52-54 MHz SEGMENT OF THE 6 METER BAND WAS MADE AVAILABLE TO RADIO AMATEUR CIVIL EMERGENCY STATIONS (RACES) DURING DECLARED NATIONAL EMERGENCIES, by Order of the FCC adopted 10/28/84. This substituted "52-54" in the MHz column of Part 97 rule Section 97.185(b) for the previous 53.35-53.75 listing therein. The action was in response to several petitions for reconsideration filed in the PR Docket No. 83-524 proceeding requesting inclusion of the entire repeater subband so as to provide for a smooth transition of existing repeaters, from ordinary to a wartime mode of operation. The Commission took this action upon finding that the Interdepartment Radio Advisory Committee (IRAC) had no objections. A previous action of FCC in Docket No. 83-524, effective March 26, 1984, provided a considerable expansion in HF and VHF frequencies available to the RACES during declared national emergencies.

A REQUEST FOR USE OF 7100-7300 kHz BY A NORTHERN MARIANAS AMATEUR CLUB WAS DENIED BY FCC. The club was referred to a Notice of Proposed Rule Making in Docket 84-706 wherein FCC proposes to change its broadcast rule 73.702(f) to permit U.S. broadcast stations on Saipan and Guam to operate on frequencies in the 7100-7300 kHz band. The world radio allocations (WARC '79) allocate the band to Broadcasting in world Region 3 which includes Pacific insular areas under U.S./FCC jurisdiction as follows: Northern Mariana Islands; American Samoa; Baker, Howland, Jarvis, Palmyra and Wake Islands; and Kingman Reef (FCC rule section 2.106). (ARRL reports that their files show that Australia, New Zealand and the Solomons "...do indeed make this band available to amateurs on the condition that no interference is caused to International Broadcasting in the area.") See last previous FCC NEWS for more on the Docket 84-706 matter.

(FOR AUTOCALL ONLY) THE CORRECT "NUMBER" TO IDENTIFY COMMENTS DIRECTED TO FCC ON THE MATTER OF THE ARRL'S REQUEST THAT FCC PREEMPT AUTHORITY TO REGULATE ANTENNA STRUCTURES, IS PRB-1. (October 1984 AUTOCALL, page 5 column 2, first paragraph).

ON OCTOBER 10, 1984, THE FCC RELEASED A NOTICE OF PROPOSED RULE MAKING CONCERNING THE AVAILABILITY AND USE OF THE 10, 18, 24, 420 AND 902 MHz AMATEUR BANDS AS FOLLOWS:

10.10-10.15 MHz: Proposed to be available to General, Advanced and Extra Class licensees with A1, F1 or A2J emissions, without the current special 200 watt power limit and without the current exclusion from use of the 10.109-10.115 MHz segment. Availability to the RACES is proposed. During the pending of this proceeding the temporary limit of 200 watts of transmitter power and the requirement for operation on a secondary non-interference basis prevails. However, the exclusion from 10.109-10.115 MHz segment is not continued.

18.068-18.168 MHz: The U.S. allocation "...provides that this band will remain an alternative allocation to the fixed service until July 1, 1989." During this period all fixed service operations in this band which are recorded in the ITU matter register will be reaccommodated. However, the "...United States government fixed operations in the ...band would preclude any Amateur Radio usage of this band prior to 1989." "Therefore we are not proposing early amateur access to the seventeen meter band. "

24.89-24.99 MHz: FCC advices it has been informed by the National Telecommunications and Information Administration (NTIA) "...that shared use of this band by the Amateur Radio Service with current United States government fixed operations would be acceptable, given the anticipated low level of solar activity during the next several years." "Therefore, we are proposing immediate implementation of allocation of this band to the Amateur Radio Service and to the Amateur Satellite Radio Service." FCC proposes that use of 24.89-24.93 MHz be limited to A1 and F1 emissions and that 24.93-24.99 MHz be used for A1, A3, A4, A5, F3, F4 and F5 emissions, as recommended by the ARRL. The entire band would be available to General, Advanced and Extra Class licensees. No special power limits are proposed. However, amateur operation in this band will "...be on a secondary basis to international fixed and mobile operations which have both yet been reaccomodated."

420-430 MHz: FCC proposes to remove routine Amateur operation above line A (along the Canadian border) but a waiver may be granted "...based upon appropriate technical considerations."

902-928 MHz: FCC proposes the band be available to all U.S. amateurs above Novice Class in all areas under FCC jurisdiction except for Colorado, Wyoming and U.S. possessions in Region 3. A0 thru A5, F0 thru F5 and type P emissions would be permitted.

FCC's Docket 84-471 NPRM advises "...interested persons may file comments on or before December 17, 1984, and reply comments on or before January 16, 1985." Note the Docket number on the comments, send an original and 5 copies (one copy is sufficient for "informal" participation) to the Secretary, FCC, Washington, D.C. 20554. "All relevant and timely comments will be considered by the commission before final action is taken in this proceeding."

FCC HAS PROPOSED TO ADD A4, A5, F1, F3, F4 AND F5 EMISSIONS TO THOSE (A1 AND A3) WHICH ARE PRESENTLY AVAILABLE FOR AMATEUR USE IN THE 1800-2000 KhZ BAND. In this PR Docket No. 84-959 Notice of Proposed Rule Making (NPRM), which is in response to an ARRL petition to authorize RTTY (F1), the Commission noted its proceeding in PR Docket 84-874 (see above) proposing to allocate 1900-2000 kHz to the Radiolocation Service, and stated "We wish to make it clear, however, that amateur radio licensees do not gain any equitable rights in the band." "Thus, if this proposal results in final rules at a later date, investment in equipment by amateur radio licensees to operate with the additional emission modes should be made with full awareness of the fact that the rule making proceeding referred to above could affect the status of operation in the 1900-2000 kHz portion of the band." Comments on PR Docket 84-959 should be filed on or before Decmber 20, 1984 and reply comments by January 22, 1985.

AS REPORTED IN PREVIOUS FCC NEWS, FCC DENIED SOME PETITIONS FOR RECONSIDERATION OF AMATEUR STATION POWER LIMIT RULES. HOWEVER, SECTION 97.67(b) WAS REVISED FOR CLARIFICATION. Section 97.67(b) now reads: "Each amateur radio transmitter may be operated with a peak envelope power output (transmitter power) not exceeding 1500 watts, except as provided in other limitations of these rules." The purpose was to "clarify that the peak power output standard is subject to certain limitations and exceptions in Sections 97.61 and 97.67 of the Commission's rules."

A WHOLESALE CHANGE IN THE EMISSION DESIGNATORS IN THE FCC'S RULES, INCLUDING THE AMATEUR RULES (PART 97), WAS SCHEDULED TO BE MADE SOMETIME IN NOVEMBER 1984. This is to conform with the FCC's rules to use the designators adopted in the World Administrative Radio Conference of 1979 (WARC '79). I have been assured that this will not change the emissions which amateurs presently may transmit.

THE GENERAL/TECHNICIAN AMATEUR OPERATOR EXAMINATIONS QUESTIONS HAVE BEEN SUBSTANTIALLY REVISED. PR BULLETIN 1035B dated November 1984 is the new Element 3 batch of questions which was available at the beginning of that month. It is expected that the VECs will specify in advance which 1036B will be used for each exam opportunity until the exam candidates have had time to obtain it and become familiar with the new version. The earlier 1035B is dated October, 1983. (W4GF)

EMERGENCY TRAFFIC

CHUCK CLARK, K4ZN

EMERGENCY OPERATION

We amateurs have a lot of frequencies allocated for our use, enough that many other services cast greedy eyes on them. One very important reason why we haven't lost them is the fact that Amateur Radio has again and again showed its value in times of emergency to affect communication when others cannot, or to provide additional communication where normal circuits are inadequate. Our past record is there, but by itself it will not suffice. We must continue to earn our right to occupy the radio spectrum.

Six elements can be identified in an amateur emergency effort:

1. Remote preparation.
2. Proximate preparation.
3. Rescue operations.
4. Local government assistance.
5. Shelter operations.
6. Health and welfare traffic.

1. Remote Preparation

The success or failure of an emergency effort will often depend on the readiness of the amateurs involved, both in terms of their equipment and in terms of themselves. It is most likely that the equipment will be available but the operatores my not be able to use it effectively, if experience in recent disasters means anything. So much present-day amateur gear will operate from a 12-volt battery that it should not be difficult under almost any circumstances to get a working station on the air in short order. And with all the VHF handheld gear available, you can get on the air almost anywhere as fast as you can push the button.

Other parts of remote preparation are often neglected. The most basic thing to remember is that you can't help people unless they know you're available. When an emergency exists, this is not the best time to introduce yourself, because officials already have more on their hands than they can handle. Even if they need your help, will they want to entrust important communications to someone they don't know? The time to make their acquaintance is before the emergency. Tell them what Amatuer Radio has to offer, what it has done, how amateurs have had to pass tests to be licensed, and that many of them are professional or retired communicators and technicians. It's impressive if you can call the official on your hand-held via autopatch while you're in the office.

Of course, if there are hundreds of amateurs in a given city, they can't all go calling on officials. Rather, they should be organized, and representatives should do the calling. In Canada and the U.S., organizing such groups and contacting officials is the duty of the Emergency Coordinator. It can also be done by an emergency committee of an amateur club, or by the RACES radio officer. Don't take for granted that it has been done. Ask. Of course, there's always the danger that you will unearth the fact that nothing is being done, and then find yourself suddenly appointed to do something!

The other part of remote preparation is planning and training. Emergencies take so many forms that you can't work out a detailed plan in advance. Planning here really means knowing what has to be done and who can do it. List the various agencies that have indicated interest in your help during an emegency, those you can foresee may need it. Also list the amateurs and their qualifications, and available equipment. Make up tentative lists of who whould go where. Devise some means of alerting the group when help is needed. Operating practice is important too. Drills are possible but the most important practice is simply actual operating so that one is familiar with one's equipment and with propagation conditions, and is accustomed to working with the others in the group. In this regard it is very helpful to provide communication services for public service events that are not emergencies, such as road races, parades or rallies.

2. Proximate Preparation

Some disasters, such as earthquakes, come with little or no warning. Others, such as hurricanes, can be forecast. If there is time, one can take steps in advance to be sure that all is ready, that the rig and emergency power supply work, that everyone involved is notified, that all positions are filled, and that operators are at their stations before the disaster strikes. In the case of storms, especially, the amateur network can begin operations by reporting to the net control station and giving information on the weather. Meteorologists can use such reports to give them a more detailed view of what is happening, and this enables them to be more precise in their warnings. Then, when the storm does strike, the net is up and running, and amateurs can be dispatched immediately to the place they are needed.

Don't forget in your proximate preparation to provide for your non-radio needs, too. This is particularly important when you have several operators, all needing food, water and other necessities, particularly sleep.

3. Rescue Operations

The last four items of the six elements of an emergency, listed above are given in the order of priority. Rescue operations come first, and the other items are tended to only to the extent that they need to be so they do not interfere with, or delay, rescue workers. If you have enough people and equipment, you can perform all four functions right from the start. If you must choose, choose in the order indicated.

In a major disaster, having amateurs as part of rescue crews often expedites the work considerably, in locating victims, directing workers to where they are needed, and communicating with hospitals, doctors, ambulances, and utility crews. Traffic at this time will be mostly emergency, and as such has absolute priority over everything else.

4. Local Government Assistance

This may not be needed. If the government's regular communication system is adequate for the job, put your people where they are needed. But amateur help will often be needed even when the government has a state-of-the-art system. There can be disruptions in phone sevice. The various sevices may have excellent commnunication with their own mobile units, but poor intercommunication between services when they have to work together. Communication systems that are adequate in normal times may be overloaded during a disaster. Important installations may be isolated because of telephone failure. And in a few cases the authorities might want to have the help of amateurs operating on 220 MHz so that their communications will be more private, as few scanners cover that band.

5. Shelter Operations

When large numbers of people have to leave their homes or find themselves homeless because of a disaster, shelters are set up to provide temporary housing. Often communication is needed between shelters and disaster relief headquarters, and in the beginning these communications may be part of rescue operations as people from the disaster area are brought to the shelters. Again, in some cases normal communication facilities may be adequate, but even here it may be wise to have an amateur on hand or easily available to render communication if the normal channels fail.

6. Health and Welfare Traffic

This is the last in priority, but still important. Every person involved in a disaster is a humane being has relatives and friends, and needs to communicate with them. To the extent that higher priority functions permit, amateurs should extend as much help as possible both to the victims and to those who desire to know about them. Amateurs working at shelters, for example, should offer to handle traffic for those being sheltered there. If they only have VHF, they can use it to send the traffic to someone who can relay it. It's best to assign a regular traffic handler to the job of relaying health and welfare traffic, and to send all the traffic to that station. In that way, others will be free for higher prority functions, the traffic will be moved, and things will go more smoothly.

It's best to separate incoming and outgoing traffic. Assign one station to each function on separate frequencies. Many amateurs find that outgoing traffic goes more easily when it goes by CW. Most of the peaple whose eagerness to help tends to obstruct emergency operations will be operating voice, as will those who are calling in to find out about Aunt Nellie. In fact, if you have the necessary facilities, you can assign two stations to handle incoming traffic, one taking only formal messages, the other informal inquiries. The one taking the formal traffic would refer informal communication to the other station operating on a different frequency.

It should be obvious that, while someting can be done with little or no preparation, Amateur Radio's most effective work in emergencies requires preparation and planning and practice. If we are to be of the greatest possible service, many of us should give these ideas serious thought, and do what we can to be ready if the need arises.

BRASS POUNDERS LEAGUE

DXers and contesters have numerous awards, but traffic handlers have few. Net certificates are given by many nets to recognize regular participation. Public service awards are given for activity in emergencies, but that's an award you can't work for as such emergencies by definition are something unexpected, unforeseen. There is, however, the Brass Pounders League. This League is for traffic handlers what the DX Century Club is for DXers. It is open to U.S. and Canadian amateurs who handle and report a total of 500 or more points for traffic handling during a calendar month, or a total of 100 or more points for originations and deliveries. The total is to be reported to one's Section Manager, itemized in the four categories: originated, received, sent, and delivered.

One point is credited for each message originated; that is, for each message sent on behalf of anyone other than the operator claiming the point, and accepted by any means other than radio. If you send a message for another person in your household, or for a visitor to your station, of for a neighbor, it counts as one originated.

One point is counted for each message sent, whether it is the operator's own message, one originated by someone and given to the operator to send (it then counts as one originated and one sent, for a total of two), or one received on the air for relay (counts as one received and one sent, for a total of two).

A message received by radio thus counts as one received, whether or not it is to be relayed or delivered. And a message that is delivered to anyone other than the operator counts as one delivered.

ARRL has a postcard form, CD-210, that can be used for making the report, or you can make it by formal radiogram if you prefer. The Section Manager issues the award, which is a QSL-sized card. To hams making the Brass Pounders League (BPL) three times, ARRL or CRRL awards a medallion.

How to Make BPL

December is the month when almost any amateur with the time and determination can accumulate enough traffic points to qualify for the BPL award. It's the big traffic season, when on top of all the other traffic normally handled there is added a burden of seasonal greetings. And it keeps getting bigger every year, perhaps at least partly due to the steady increase in postal rates and in the cost of cards, but also because there's something more personal about a greeting that's handled by people, relayed by people, and delivered by people. In addition, it's the time when our sevice gets its best workout as preparation for sevice in emergencies.

During December all circuits are loaded to capacity and beyond. Many clubs and other groups set up displays in shopping malls and such places with an amateur station to handle messages anywhere that third party traffic is allowed. Incidentally, some groups have found that, while two-meter relay may be the simplest way to move the traffic from the booth to the first relay station, doing it by CW is much more impressive to the public - a real crowd-stopper. These groups need operators. And so do all the nets, particularly those at higher levels in the National Traffic System. Offer your services to any of them and you'll be accepted with open arms. But be prepared to be loaded down with ten or fifteen messages every time. It's not hard to pile up a total of forty or fifty points a day, and it takes only a few days at that rate to reach the BPL level.

For Brass Pounders Only?

Some amateurs may be misled by the title of this award. "Brass pounder" was a nickname given to telegraph operators in the past, before the advent of teletypes and such things, when they used straight keys. This was the dominant mode for handling traffic on the amateur bands a half century ago when the award was instituted. Back then most traffic nets used CW, and the operators pounded brass (or wiggled bugs), and the name has stuck. Now you can make BPL operating voice only, without touching a telegraph key, even though it's probable that more traffic is still passed by CW than by voice, although not much more. Being able to work both modes is best of all, however, and also makes you a more valuable operator both during the rush season and especially when amateur service is needed in an emergency.

INTERNATIONAL THIRD-PARTY TRAFFIC

In most countries the telephone and telegraph service is a government monopoly, unlike what we have in Canada and the United States with service provided by private corporations under government regulation. Governments that exercise such a monopoly take a dim view of amateurs who handle traffic without charge, traffic that could, and the government thinks should, go over its own lines and be paid for by the sender. Such an attitude may seem to us shortsighted: few countries if any can match the telephone network of the U.S. and Canada, its rates, its coverage, and the handsome profit it turns from its operations, despite the fact that amateurs here also have the most extensive traffic-handling system. As a matter of fact, a study would show that amateur traffic handling results in a net gain in revenue for the telephone companies, because communication via Amateur Radio is not as convenient as via the commercial system, and so contacts via Amateur Radio are often followed by long-distance calls that otherwise would never have been made.

Shortsighted or not, however, that is the policy of many governments that maintain a monopoly on communications, and they have the guns, so we had better do what they say. In some instances there is an additional reason: in police states, the government wants to be able to keep tabs on what people are saying over the telephone, and of course such governments would be the ones to come down hardest on amateurs who provide a way around the government's phone system.

In the early days of Amateur Radio, this posed no problem. But once international DX became commonplace in the 1920s, governments felt something must be done to protect those monopolies. The international conference at Washington in 1927 made a rule against amateur third-party to protect those monopolies. The international conference at Washington in 1927 made a rule against amateur third-party traffic handling, but it proved to be vague and unenforceable. Then at Madrid in 1932 the present rule was adopted, clear, absolute, unambiguous: no third-party traffic, period. It was with considerable difficulty that a few countries managed to have the exception inserted that allowed special agreements between countries to allow it. The U.S. and Canada made such an agreement immediately, and amateurs were able to continue their traffic handling without interruption. Additional agreements were made by both countries over the years, and now Canada has agreements with 22 countries, and the U.S. with 40.

Many of the countries which have signed third-party agreements do indeed have government-operated communication systems (the head of the system is often the Minister of Posts and Telegraph) but they have seen the wisdom of allowing Amateur Radio to handle third-party traffic too. In some Latin American countries, for example, communications are practically non-existent in the jungle areas, and the governments want to encourage anything that will help develop the resources in those areas.

MOVING THE TRAFFIC

The legal authorization to handle traffic is only the first obstacle to overcome. Just how does one go about passing a message to Liberia, Uruguay or Pitcairn Island? Just go on the air and call "CQ Liberia"? You'll probably shout yourself hoarse before you get a reply. There are two routes most likely to offer an outlet, although in many cases even these are quite chancy. You can prepare a formal message and send it via the National Traffic System (NTS), or you can check into the various 20-metre phone nets that operate towards the upper end of the band. Traffic filed for locations outside Canada and the U.S. in the National Traffic System is routed to the Eastern Area Net usually, and a representative from the International Traffic and Assistance Net (ITAN) picks it up for relay outside the countries. The ITAN is one of several nets that meet on the 20-metre band, and stations from foreign countries frequently check into those nets. You might check in yourself and see if you can find a station in the area in which you are interested.

Even so, don't be surprised if the station is reluctant to accept your message. In many cases, delivering a message to a third party will be difficult, impossible, or expensive. The country probably has no organized amateur traffic system, in fact amateurs may be forbidden to handle domestic third-party traffic. The amateur may be in an isolated location, and the addressee in another location equally isolated. Or maybe the amateur just can't be bothered. Remember, only about one percent of U.S. and Canadian amateurs are involved to any great extent in traffic handling. Therefore, if there are only 100 amateurs in a given country, the same ratio would mean only one who would handle traffic. There is no law anywhere that says amateurs must handle it, with one exception. Article 45 of the International Telecommuniction Convention says, "Radio stations shall be obligated to accept, with absolute priority, distress calls and messages regardless of their origin, to reply in the same manner to such messages and immediately to take such action in regard thereto as may be required." Even here, however, if the station still refuses to accept it, about all you can do is to tell him what you think of him (if you can do so without using profanity), and in an emergency you would do better to use your time trying to find an outlet elswhere.

European Countries

Most European countries do not allow their amateurs to handle traffic, either domestic or international, for third parties. European governments were the most influential in Madrid in 1932 when the rule against third-party traffic was adopted. But these governments do not consider amateur-to-amateur-to-amateur traffic to be third-party traffic: if both the signer and the addressee of a message are amateurs, the message may be handled. The regulations of the FCC, however, take a stricter view: anything except what one control operator says to another when in direct contact with each other is third-party traffic. And yet, in practice the FCC (or at least an FCC staffer) has declared permissible relaying communications from one amateur to another without any third-party agreement between the countries involved.

Could a Canadian amateur send a message to someone in Liberia via NTS? Canada has no third-party agreement with Liberia, but it does with the U.S. Could the traffic then be routed to a U.S. station who could relay it to Liberia? The FCC says yes. I have not heard of a DOC ruling on the matter. In such cases, it's often better not to ask, just go ahead and do it.

Peace on Earth

The month of December is the big month for traffic, when we have all the nets loaded down with greetings, wishing peace to all. This may be true more than ever this year when international tensions seem to be increasing. It is your columnist's hope that Amateur Radio may continue to pursue its misssion of promoting communication among the peoples of the world, to promote peace by helping us know one another better, and in particular that this peace may prosper in the homes and families of the world's amateurs.

Third-party Countries

U.S. amateurs are permitted to handle third-party traffic with amateurs in all countries listed. Canadian amateurs may exchange third-party traffic with countries indicated by (C).

Antigua and Barbuda, V2
Argentina, LU
Australia, VK (C)
Belize, V3
Bolivia, CP (C)
Brazil, PY (C)
Canada, VE (C)
Chile, CE (C)
Colombia, HK (C)
Costa Rica, TI (C)
Cuba, CO
Dominica, J7 (C)
Dominican Republic, HI (C)
Ecuador, HC
El Salvador, YS (C)
The Gambia, C5
Ghana, 9G
Grenada, J3
Guatemala, TG (C)
Guyana, 8R (C)
Haiti, HH (C)
Honduras, HR (C)
Israel, 4X (C)
ITU (Geneva), 4U1ITU
Jamaica, 6Y (C)
Jordan, JY
Liberia, EL
Mexico, XE (C)
Nicaragua, YN (C)
Panama, HP
Paraguay, CP (C)
Peru, OA (C)
Pitcairn Island, VR6
St. Kitts, Nevis, V4
St. Lucia, J6
St. Vincent, J8
Swaziland, 3D6
Trinidad and Tobago, 9Y (C)
Uruguay, CX (C)
U.S.A. W/K (C)
Venezuela, YV (C)

If you have any information, stories or pictures pertaining to emergency and traffic handling, please send them to:

Chuck Clark, K4ZN
Mepkin abbey Rte. 3, Box 800
Moncks Corner, SC 29461

MERRY CHRISTMAS

AND A VERY HAPPY NEW YEAR 1985

YL

Cathy Hrischenko, VE3GJH

1985 will be the 75th Anniversary of the Canadian Girl Guides. The Girl Guides, with the help of the Canadian Ladies Amateur Radio Association (CLARA), are celebrating by having an on-the-air jamboree. We are trying to form a network of YLs and Girl Guides and Guiders across Canada.

If you are a Girl Guide, Guider or YL we would appreciate your participation in this celebration. We would like to arrange some skeds. If in doubt as to what can be done or how to go about it, feel free to contact me, Cathy VE3GJH or Susan VO1OI, and/or your Girl Guide Headquaters.

The British Girl Guides are also celebrating the 75th anniversary and the British Young Ladies Amateur Radio Association (BYLARA) are planning the same thing. The YLs to contact there are Lynne G4FNC or Jennifer G8WWO.

Thinking day is February 22. It was suggested by G.G. Headquarters that we celebrate the week of February 17 to 23. Let me know how you make out, O.K.?

The ultimate in working a DX station (after receiving a QSL, of course) is to meet that person. I've been very fortunate over the years. The most recent visitors were Aola ZL1ALE and Dave ZL1AJN from Papakura, New Zealand. I've been chatting over the years with Aola and writing letters, but had never met her and was quite excited when she and Dave said they were making a trip around the world and would make a point of checking into the Toronto area for a few days. I invited them to come and stay at our home. They agreed and said they would be bringing along some slides of the DX-peditions. We arranged a party for them with some of the local hams including some CLARA members, as Aola is a member and has talked to several YLs in this area on the CLARA net.

During the evening Dave showed a very interesting slide show on the DX-peditions: in 1977 a DX-pedition to the Kermadec Islands with Dave ZL1AJN, his daughter Carol ZL1JL, Marion ZL1BLK, who was considered team leader, and ZL1BKX; and in 1979 a Tri-Island DX-pedition to 5W1, A35 and ZK2 land was made by Dave ZL1AJN, Aola ZL1ALE and Ian ZL1BCG (x-VE3). Aola was the first YL to operate from ZK2. These 3 YLs made new YL countries for many of us.

I would like to hear from other YLs that have been involved in DX-peditions.

73/33/88 as the case may be, VE3GJH

Dave, ZL1AJN and Aola, ZL1ALE /VE3 (P.S. Their QSL manager is behind them.)

SPECTRUM WEST

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AllComm/Spectrum West is pleased to announce that once again the DATONG line of fine Ham/SWL accessories offered by this British manufacturer are available including the FL 3 Multimode Audio Filter and SRB 2 Automatic Woodpecker Blanker.

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The strong features ofthe FL 3 include both a low and high pass filter fully tunable from 200 to 3500 Hertz, ideal for SSB reception. The skirts are very steep adding to the high performance of the unit. In addition there are 2 notch filters; one which operates automatically to locate and eliminate tune-up whistles and steady tone interference. Once engaged complete hands-off tracking will do the rest. Additionally for even better rejection a second notch filter tunes manually from 200-3500 Hz. The independent operation of the 4 filters allows the user complete freedom in choosing the type of filtering desired. The flexibility and performance are unsurpassed.

For those using RTTY and CW a special tuning mode will combine the low, high and peak-notch filters into a single 12 pole filter with superb selectivity while maintaining the non-interacting control for center frequency and bandwidth.

All fuctions and controls are calibrated and the unit can be used with any type receiver in series with the loud speaker or phone jacks. A normal 12 volt power supply is all that is needed. The appropriate power plug is supplied with the unit.

DATONG SRB 2 AUTOMATIC WOODPECKER BALNKER

DATONGS leadership in the market again is highlighted in this unique product, the only one of its type. Not only does the blanker eliminate the woodpecker it does it automatically for complete hands-off operation once turned on. The unique circuitry allows the SRB 2 to first track and then automatically blank the woodpecker signal. Unlike other blankers this unit does not require you to adjust to the exact synchronisation or pulse width and thus once activated you will not need to readjust it as the woodpecker comes and goes all over the bands.

The unit is connected in line with the coax and audio lines to allow for the detection and blanking. It can work with any receiver or transceiver allowing passage of up to 150 watts RF. The RF shielded case eliminates all other problems inherent in other blanker designs. The SRB 2 uses 12 volt DC and all plugs and connectors are supplied with the unit.

The only way to know if a product is as good as they say, is to try it personally. Now AllComm would like you to do just that. We want to send you a C-60 cassette with a demonstration of the DATONG products so you can hear for yourself. We are so sure you'll like what you hear we'll give you a certificate good for $5.00 off the price of the SRB 2 & FL 3 or $2.00 off any other DATONG product that we offer.

Just send $1 for postage & handling ($1.50 or 7 IRC's for overseas) to: DATONG TEST LISTEN
5717 N.E. 56th St., SEATTLE, WA 98105, USA

NEXT ISSUE OF RADIOSPORTING

W2PV On Antennas, cntd.
A Contester's look at TS-930S
Modifications for Kenwood
CAN-AM High Claimed Scores
The Flying "Big Bertha"

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Please send us your High Claimed Scores from the major contests for listing in RADIOSPORTING. This can be done right after the contests or after their mailing deadline. Also, your notes and observations on the action during the contests are welcome. Tell us how it all sounded at your end!

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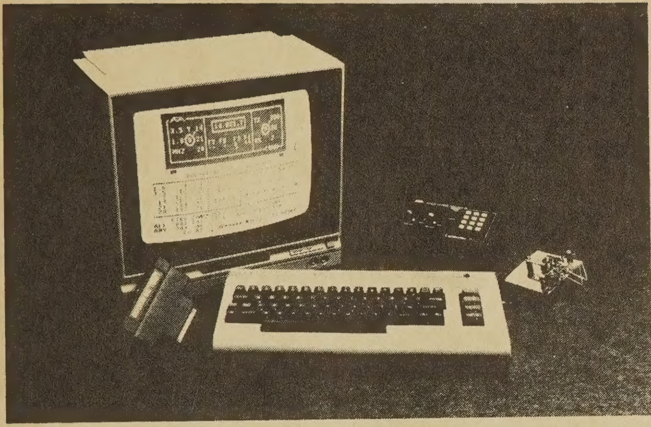

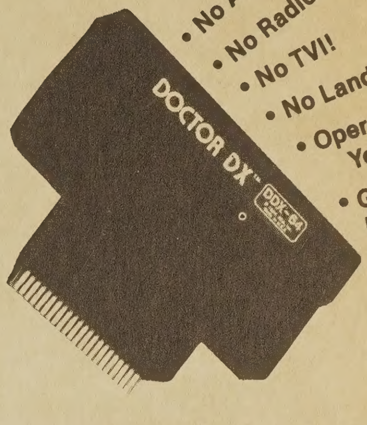

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INTERNATIONAL RADIOSPORT ASSN.

P.O. Box 65, Don Mills, Ontario, Canada M3C 2R6 Tel. (416) 438-6313

Purpose and objectives:

1. To promote international friendship and goodwill through the sportsmanship and radio contesting.
2. To improve the quality of amateur radio operators and operating through education and experience, by voicing the opinions of radio amateurs that are experienced and have contributed to the hobby.
3. To promote amateur radio contesting and other operating related activities as a sport, and to provide the publicity and recognition that it deserves in the public media.
4. To publish articles in the monthly magazine "RADIOSPORTING" featuring timely articles on various subjects of interest to Contesters, DXers, SWL, VHF, UHF and microwave enthusiasts, on RTTY, SSTV, Computers in communications, Fox hunting and anything of interest to the active Ham striving for self-improvement. To feature technical articles on equipment design and modifications, antenna construction, radio-wave propagation, and commercial equipment reviews by qualified people.
5. To organize as an annual event: the "International Contest Symposium" which would run in parallel (evenings) with the Dayton Hamvention, and feature timely topics with the participation of some of the world's leading amateurs.
6. To hold annual Awards Dinner with an entertainment program, where awards for various achievements will be presented.
7. To maintain and publish all time record tables for significant contests.
8. To sponsor and run a yearly International Contest Championship. From the results of a number of major contests, each year the "Contester of the Year" will be decided in various categories.
9. IRSA will administer a "Contest Hall of Fame" and vote on awarding the membership to those who have significantly contributed to the sport of contesting.
10. IRSA will coordinate and assist in the scheduling of international contests.
11. Regular weekly meetings on air will be held on 20 and 80 m. (14.199, 3.799)
12. An automatic, computer controlled bulletin station will transmit the latest DX and contest news on CW and RTTY. (14.099)
13. All in all, The IRSA will be dedicated to the pursuit of excellence and quality in Amateur radio by promoting, publicizing and leading the way.
14. Attractive numbered membership certificates and badges will be issued to members.
15. IRSA will be run by contesters who are selected for their accomplishments and it will be independent of any national or commercial organizations.
16. IRSA will assist and sponsor Contest/DXpeditions, Trophies and other radio sporting and publicity events.
17. IRSA is a non profit organization, with all proceeds to be used for financing events, awards and expenses incured and sponsored by IRSA.

The initial fee to join the IRSA is US $12 and it also covers the cost of certificate and a badge. The yearly membership dues are US $5.

Honorary Life membership will be awarded to those who significantly contribute to IRSA and sport of contesting.

The members will be entitled to be elected and to elect officers of IRSA. They will also enjoy many services and priviledges offered to members.

RADIOSPORTING

INTERNATIONAL MONTHLY MAGAZINE –
BY AND FOR ACTIVE RADIOAMATEURS

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